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Physician Payment Review Commission

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Annual Report to Congress

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Physician Payment Review Commission

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March 31, 1988 REPORT TO CONGRESS

PREFACE

The Physician Payment Review Commission was created by Congress in the Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272) to advise it on reforms of the methods used to pay physicians for services to Medicare beneficiaries. It began work in November 1986 and issued its first report, *Medicare Physician Payment: An Agenda for Reform*, in March 1987. The Commission's 13 members represent a broad range of experience and perspectives on physician payment.

The Commission plays four roles. First, it provides independent expert advice to Congress and the Secretary of Health and Human Services. Second, the Commission actively seeks the views of beneficiaries, physicians and others concerning the issues and recommendations it is considering. The Commission also conducts objective analyses to provide the basis for policy decisions to alter Medicare physician payment policies. Finally, the Commission undertakes the design work necessary to implement policy changes.

In its first report, the Commission established goals for physician payment policy and charted a direction for Medicare program reform, calling for the development of a fee schedule for Medicare. Since that time, it has moved well into developing a fee schedule proposal. It has also broadened its focus to encompass analysis of options to moderate the growth in expenditures without reducing quality of care and issues related to capitation and Medicare data needs. The scope of work covered in this report is a reflection of the effort and commitment of the Commissioners and the Commission staff and the many people and organizations who have provided advice and information throughout the year.

Robert Berenson, M.D., David Colby, Ph.D., Lucian Leape, M.D., Susan Marquis, Ph.D., and Mark Smith, M.D., worked as consultants to the Commission in the past year. Julie Buhler and Abbie Guttenberg worked with the staff as policy fellows. Jim Schneider edited the report. The Commission received assistance on many aspects of the report from staff of the Health Care Financing Administration and other agencies of the Department of Health and Human Services, the Congress, the Office of Technology Assessment, the Congressional Budget Office, the Congressional Research Service, and the General Accounting Office. It also benefited from the many useful comments on earlier drafts of the report from organizations representing beneficiaries, physicians, other health professionals, hospitals, suppliers of services and equipment, and the health insurance industry.

Philip R. Lee, M.D.
Chairman

March 31, 1988

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EXECUTIVE SUMMARY

The Physician Payment Review Commission (PPRC) was created by Congress to make recommendations for reform in Medicare's system of paying physicians. In its first report a year ago, the Commission established goals for payment policy and charted a direction for Medicare program reform. In this report the Commission describes its work since that time in shaping long-term options for reform and taking immediate steps consistent with those options to refine current policy.

In its first report to Congress the Commission called for the development of a fee schedule for Medicare. In the past year, it has moved well into the conceptual and technical work necessary to develop a fee schedule proposal. The Commission has also given high priority to encouraging the appropriate use of services, seeking ways to moderate the rate of expenditure growth without reducing beneficiaries' access to high quality care. In all its work, the Commission is particularly concerned about how beneficiaries are or may be affected by Medicare policies.

PROGRESS ON THE FEE SCHEDULE

In the past year the Commission has made significant progress in developing a proposal for a Medicare fee schedule. It has focused on the conceptual basis for a relative value scale (the relative rates of payment among different physician services), whether the payments for a service should vary by specialty, and how payments for services should vary by geographic area. It has also identified changes in the use of coding that would be required for a fee schedule to be implemented, and has planned a consensus process to develop the changes.

The Commission has considered several other issues related to the development of a fee schedule. Those issues include geographic variation in Medicare charges, policies related to assignment and balance or extra billing, and payment for diagnostic services with a substantial non-physician component.

Basis for the Relative Value Scale

Two major bases for a relative value scale are feasible--historical charges and resource costs. The rationale for using what physicians have historically charged is that such charges reflect a market valuation of physicians' services. But the market for physicians' services that are insured does not function well, and the resulting pattern of charges reflects serious distortions. Indeed, reducing these distortions is the principal reason the Commission is advocating a fee schedule. The Commission recommends basing a relative value scale primarily on resource costs.[1]

[1] Commissioners Beahrs, Lockhart, and Wright dissented from this conclusion. Their views appear at the end of chapter 3.

A resource-cost basis would reflect estimates of what relative values would be under a hypothetical market that functions perfectly. Under such a market, competition drives relative prices to reflect the relative costs of efficient producers.

The most difficult task in developing a relative value scale (RVS) based on resource costs is that roughly half the costs reflect physicians' time and effort. The usefulness of such an RVS depends on the accuracy with which the relative amount of physician time and effort for various services can be estimated. A research team led by Professor William Hsiao of Harvard is developing a resource-based RVS. The Commission plans a careful evaluation of this work to decide whether the Hsiao RVS, perhaps after modification, would be suitable for a Medicare fee schedule. This evaluation will include technical work by the Commission staff and consideration of the assessments of a wide variety of interested parties.

Geographic Multipliers

Under a fee schedule based on resource costs, payment levels should vary geographically to reflect differences in costs of practice. Measuring the variation in the prices that physicians pay for such overhead items as office rent, wages of nonphysician employees, and professional liability insurance is relatively straightforward conceptually and appears to be feasible. Developing measures to reflect variations in the valuation of physicians' time and effort is more controversial and involves greater practical difficulties.

The Commission would like to stimulate discussion on the appropriate method to address geographic variation in the valuation of physician time and effort before making a recommendation on geographic multipliers specific to the fee schedule. One issue is whether geographic multipliers should include any variation at all in this factor. If there is to be variation, possible bases for it include a measure of cost of living and an index of earnings of nonphysicians. Both conceptual and practical considerations appear to favor an index of earnings, either for nonphysician professionals or for a broader range of employed individuals.

Specialty Differentials

Since Medicare's inception, policies concerning whether payments for a service should differ according to the specialty of the physician providing it have been developed by each carrier. As a result, policies have varied widely from one area of the country to another. A Medicare fee schedule would require the creation of a national policy on specialty differentials.

While the Commission has not yet developed such a policy, it has defined an approach to the issue. When a service provided by two physicians is essentially the same, the payment should be the same. For many procedures, coding is sufficiently precise that this requirement is met and no specialty differentials are required. However, for other services, particularly office visits, substantial evidence exists that physicians with different specialties see different types of patients or have different approaches to their care, or both. Unless the coding of visits is reformed to better reflect their content, specialty differentials might be required for such services.

Where specialty differentials are called for, the differentials should be based on resource costs--the time and intensity of the physicians' effort and overhead expenses. The Commission is considering the alternative methods of deciding which physicians are specialists for purposes of payment.

Procedure Coding

Ambiguity in coding can complicate the development and use of a fee schedule. If a coding system is not interpreted uniformly by providers and payers, it is difficult to assign accurate relative values to codes and to ensure that assigned fees are applied to the intended services.

The Commission is working to make the interpretation of codes more uniform under the fee schedule. In cases such as global surgical services, this can be accomplished by standardizing carrier interpretation and implementation of current codes. The Commission has developed a process for this reform that uses an interspecialty consensus panel to develop a generic description of global services and groups of physician experts to identify the specific components of individual global services.

In the case of visit services, ambiguity in coding may persist after carrier standardization. The Commission is recommending that current visit codes be evaluated to ascertain their specificity, reliability and correlation with resource costs. If the current system cannot provide a sound basis for valuing, reporting, and paying for visit services, more specific definitions of visit codes will have to be developed. The Commission is investigating potential options for this type of reform.

The fees assigned to services influence the way that codes are used. In particular, codes that are defined clearly and implemented consistently may be subject to inappropriate use if there are substantial differences in payments for services that are similar in actual value. Traditionally, this has been considered to be a coding issue, and one proposed solution has been to aggregate closely related codes. However, it is more accurately a problem in relative values, and it may not be necessary to aggregate codes if the appropriate value and fee is assigned to each service. The Commission is exploring the use of specialty consensus panels to advise it on a relative value scale and might ask those panels specifically to address the relative values of closely related services.

Setting the Conversion Factor

A conversion factor transforms a relative value scale into a fee scale in dollars per service. The level of the conversion factor will determine projected expenditures for physician services, given an expected volume of services. The Congress could set the initial conversion factor to be budget neutral--that is, so that the projected level of expenditures under the fee schedule was equal to the amount that would have been spent under the old payment system--or to increase or decrease projected expenditures. Though the implications for the federal budget are likely to be the principal determinant of the initial conversion factor when the fee schedule is implemented, the effect on beneficiary access and financial liabilities must also be considered.

Updating the Fee Schedule

Once implemented, the relative value scale, adjustments such as geographic multipliers, and the conversion factor must be updated. Processes must be developed to update the conversion factor annually, and to make incremental modifications to the RVS and the geographic multipliers.

The Commission is examining several alternative processes for these tasks:

- o a formula approach linking the conversion factor to an index to yield a predetermined increase in Medicare expenditures;
- o using the existing regulatory rulemaking process of the Department of Health and Human Services (HHS);
- o recommendations to the Secretary of HHS or to Congress by an independent board or commission; and
- o negotiation between physicians and representatives of the federal government.

Geographic Variation in Charges and Interim Policy Changes

The Commission has conducted extensive data analysis on current patterns of geographic variation in Medicare prevailing charges. Geographic variation, while significant, is less extensive than anecdotal evidence might suggest. Variation is generally greatest for visit services and least for diagnostic procedures. Areas with charges that were relatively high for one procedure did not necessarily have relatively high charges for other procedures. Charges are usually higher in urban areas, but there remains substantial variation among urban areas and among rural areas.

Adjusting for costs of practice reduced some of the geographic variation in charges, but much of it remained. Differences between urban and rural areas decreased substantially, so that on an adjusted basis, urban charges were, on average, only slightly higher than rural charges.

The Commission examined a series of interim options to address excessive geographic variation in charges. Placing a floor and ceiling on the prevailing charges for each procedure would increase equity among physicians but could cause some charges to move in directions opposite to those likely under a fee schedule. In particular, a ceiling on prevailing charges might lower fees that later would be raised under a relative value scale. In addition, some of the reductions might be large and might be handled better in the context of the comprehensive reform of a fee schedule.

The Commission recommends that a floor equal to a fixed percentage of the national mean be placed under primary care services (office visits, nursing home visits, home visits, and emergency room visits).[2] This would tend to increase beneficiaries' access to primary care services in some areas and might reduce their out-of-pocket costs since reductions in extra bills for unassigned claims could exceed the additional coinsurance from the higher prevailing charges. Equity among physicians would be increased. The budgetary cost of a geographic floor could be offset by a variety of policy options, of which a geographic ceiling for specialized procedures is one.

Assignment and Participation: Current Status and Policy Options

Since its inception, Medicare has permitted physicians to decide on a claim-by-claim basis whether to accept assignment (to bill Medicare and accept Medicare's allowed charge as payment in full) or to charge the patient directly, leaving the patient responsible for the full charge even if it exceeds what Medicare will pay. The amount in excess of Medicare's allowed charge is known as the balance bill or extra bill.

Physicians currently accept assignment for almost three-fourths of Medicare claims, yet the cost to beneficiaries of the extra billing on nonassigned claims was nearly $2.5 billion in 1987. The Commission is concerned about beneficiary financial liability under Part B--including liability under extra billing--but is also aware of the importance to physicians of Medicare's long-standing policy to give physicians a choice whether to accept assignment. It is therefore examining evidence on the effects of current balance billing policy and reviewing options for change so that it can improve current approaches and determine what policies would be appropriate to accompany a fee schedule.

Recent changes in Medicare policy have focused on increasing incentives for physicians to accept assignment or to participate (that is, to agree to accept assignment on all charges for a year), on helping beneficiaries find physicians who will provide them care without extra billing and on constraining extra billing while preserving some freedom for physicians to extra bill. These changes include creating the Participating Physician Program, providing beneficiaries with directories of participating physicians, and placing constraints on the billed charges of physicians who choose not to participate.

These changes have contributed to large increases in overall assignment rates and the percent of total services provided by participating physicians. However, significant variation in assignment rates by geographic location, specialty, type of service, and site of service persists. Such variation differentially affects the ability of beneficiaries to avoid balance bills. It also suggests that physicians' de facto opportunity and inclination to balance bill varies. Analyses of the factors affecting physicians' assignment and participation decisions show that both economic and noneconomic factors are important. Increases in Medicare payment levels would increase assignment and participation, but with large financial implications for the Part B trust fund, beneficiaries, and physicians. Philosophical attitudes also have a major effect and are less amenable to alteration through policy changes.

Possible improvements within the framework of current policy, such as providing more information to physicians or expanding efforts to inform beneficiaries about participating physicians, are likely to have only a small effect on beneficiaries' ability to avoid balance bills.

More far-reaching reforms could be shaped by decisions on three policy issues: the scope of services and the population to which concerns about extra billing

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[2] For example, after adjustment for costs of practice, no prevailing charge would be less than 80 percent of the national mean for the service.

should apply; the relative importance of eliminating extra billing versus limiting it; and the mix of policies between the use of financial incentives and the use of limits on extra billing.

The Commission recognizes that a fee schedule has major implications for balance billing policy. A fee schedule, if budget neutral, is likely to have relatively modest effects on overall national assignment and participation rates, but much larger effects on individual beneficiaries and physicians. Decisions about setting payment levels under the fee schedule and about possible limitations on charges must take into account their potential impact on the ability of beneficiaries to obtain needed services.

Payment for Diagnostic Services with a Substantial Nonphysician Component

Certain diagnostic services consist of a relatively large technical component and a relatively small commitment of time, effort, or other resources by physicians much like clinical laboratory services now paid through a fee schedule. These services are often performed by a technician under a physician's supervision or are highly automated. The Commission recognizes that there is a distinction between these and many other physician services. Differences in physician input across most services are significant and meaningful, but the major differences across these diagnostic services are mostly technical in nature, with physician input tending to be relatively small.

The Commission will study these diagnostic services to gain greater understanding of the accounting of technical costs and the relationship of the professional to the technical component so as to work toward incorporating of these services into a fee schedule. Because of similarities between these diagnostic services and clinical laboratory tests, the Commission has analyzed recent changes in clinical laboratory reimbursement. It has drawn on that experience to address conceptual questions about how utilization, practice style, quality, cost, access, and convenience might be affected by changes in reimbursement for diagnostic services.

Given that diagnostic tests have historically subsidized office visits, particularly among primary care practitioners, the Commission recognizes that major changes in payment for those tests should not precede reform of payment for visits. During the coming year the Commission will analyze data on current reimbursements for these services, develop a list of services that fall into this category, and, through analysis of a sample of tests, develop recommendations for reimbursement policy.

UTILIZATION, COST, AND QUALITY

Though the growth of Medicare expenditures for hospital services has slowed in recent years, expenditures for physicians' services have grown particularly rapidly, averaging 17 percent a year for the past decade. This rapid growth in expenditures has required increases in the program's support from general revenues and in the premiums that beneficiaries must pay.

While a number of factors have contributed to the growth of expenditures, the primary factor now driving the increases for physicians' services under fee for service is the increasing volume of services. Although increases in charges for each service have been tightly constrained for the past five years, this does not appear to have substantially slowed expenditure growth. The focus must now shift to limiting the rate of growth of the volume of services.

While most services provided to Medicare beneficiaries are of substantial benefit, some are unnecessary and others provide only a very small benefit despite substantial costs. The challenge for controlling the rate of growth in expenditures is to identify and selectively reduce the services of least benefit.

The primary concern about any effort to control growth in expenditures is the possible threat to access and quality of care. The Commission is very much aware of this as it considers alternative policies. It also plans to examine thoroughly Medicare's ability to assess and assure quality of care during the next year.

A Strategy to Moderate the Rate of Growth of Expenditures

Medicare needs an effective strategy to moderate the rate of growth of expenditures without threatening the quality of care. A successful strategy will require three elements: the will to reduce not only clearly unnecessary services but also services that provide only marginal benefit at disproportionately high cost; effective mechanisms to give patients and their physicians the means and incentive to reduce those services; and better knowledge of which services provide little or no benefit, so that reductions can in fact be targeted to them.

The responsibility to reduce services of least benefit must be shared by patients and their families, physicians, and the general public. Copayments are intended to make beneficiaries aware of the costs of services, and to forgo services of little or no benefit. However, policymakers have been reluctant to rely on increased beneficiary copayments to control expenditures for fear they will reduce quality and access, particularly for the poor and the seriously ill.

Since physicians make or influence most of the decisions to use medical services, much of the responsibility for reducing services of minimal benefit will fall to them. They will be accountable to the public, as well as to their patients, for using services appropriately. Practice guidelines and feedback of utilization information will help them identify services of least benefit. Finally, the public must recognize that unless we forgo costly services that provide little or no benefit, expenditures will continue to grow rapidly.

The Commission has begun to evaluate current Medicare activities to control expenditure growth that focus on controlling the volume of services. For example, this report suggests several ways to increase the effectiveness of utilization review. The Commission has also begun work to develop a more comprehensive strategy to reduce services of least benefit to patients. This report describes several new programs that have potential for use in this task: practice guidelines, feedback of comparative utilization information, and expenditure targets. The Commission will carefully evaluate the potential of each of these programs.

Utilization Review

Medicare now relies on utilization review by part B carriers and Peer Review Organizations (PROs) as its primary method of reducing unnecessary services. Despite improvements, however, problems remain. The clinical soundness of the review criteria used by PROs and carriers has not been systematically assessed, although these criteria vary considerably in specificity and scope. Little has been invested in research to improve the efficiency and effectiveness of

utilization review, and the measurement of current program results is sketchy. Beneficiaries and providers frequently have problems getting prompt and understandable answers to questions, and communication with physicians about local utilization review processes and problems is very limited. In general, the administration of utilization review and related functions is compromised by funding limitations and the addition of new responsibilities without concomitant funding increases. The results are poor service and higher outlays for unnecessary services.

The Commission suggests several actions that may help increase the effectiveness of utilization review to reduce unnecessary services and to better limit the reductions to services that do not benefit the patient. In the short-term, the Health Care Financing Administration should comprehensively assess the clinical reasonableness, effectiveness, and administrative burdens of current criteria and processes for utilization review. Over the longer term, a focused research strategy is needed to strengthen the clinical foundation for review and to improve the effectiveness and efficiency of review techniques. Results should feed into ongoing program oversight and fundamental program design.

In addition, Medicare should consider broader use of preadmission and preservice review, management of high-cost cases, and intensified review of care outside the hospital. The Commission will evaluate the potential for high-cost case management for Medicare.

Finally, carriers and PROs must be provided adequate and predictable funding to carry out their current and future responsibilities. They should be allowed greater flexibility in using contracted funds to achieve their objectives.

Practice Guidelines and Feedback of Utilization Information

Uncertainty about the benefits of services to patients makes it difficult to identify and reduce services of least benefit. The Commission has begun to examine several methods to give physicians and their patients the information they need to determine which services are indeed of little benefit and the means to reduce them. Two methods are described in this report: practice guidelines to provide recommendations for clinical practice and feedback of comparative utilization information.

Practice guidelines are developed through consensus of expert physicians, building on the available information in the medical literature. They are intended to embody the best available knowledge of appropriate use of services in a form physicians easily use. Sound and clinically credible practice guidelines would help physicians--and their patients--determine how much a particular service is likely to benefit the patient with a particular clinical presentation. Guidelines can also provide a sound clinical basis for utilization review.

If guidelines are to fulfill this promise, they must be clinically sound and credible. Both the process through which guidelines are developed and the ways they are applied must recognize the unavoidable uncertainty in medical knowledge and the essential role the attending physician's clinical judgment must play in medical practice. The Commission has begun to evaluate existing guidelines and alternative processes for developing sound guidelines, and how guidelines could be used in Medicare.

Providing physicians with information on their use of services compared with that of their peers can lead them to examine their practices and to reduce unnecessary services. This method is now being used in several projects. Evaluation of its effect on quality and costs will allow determination of its potential for use in Medicare.

These new initiatives are potentially important components of an effective strategy to reduce services of minimal benefit. The Commission will evaluate their potential in the near future, drawing on the work of interested medical organizations, government agencies, and others. It will convene a conference of experts in the field and interested parties to help it do so.

Expenditure Targets

The Commission is also examining the potential of expenditure targets to help moderate the rate of growth in the volume of services. Expenditure targets constitute a way of adjusting updates of physicians' fees in an area based on how total expenditures compare with a predetermined target. If physicians collectively control the volume of services, they can achieve a full scheduled increase in fees. The intent of expenditure targets is to make clear to the physician community their responsibility to employ medical resources wisely, while relying on the medical profession to develop or support measures to moderate the rate of expenditure growth. Expenditure targets could also supplement such other measures designed to reduce services of least benefit to patients, such as utilization review and practice guidelines.

For expenditure targets to limit growth in expenditures, the physician community must translate the collective incentive into changes in what individual physicians do when caring for Medicare patients. The Commission will explore whether and how this can occur.

The Commission will also investigate a number of important design and feasibility issues, including how to set and implement targets, the relative importance given to targets for rates of increase in expenditures compared with targets directed at geographic differences in the level of per capita expenditures, which geographic units to use, and how to provide timely and accurate Medicare data on expenditures.

The Commission has just begun to explore the potential of expenditure targets as a component of a strategy to moderate the growth in expenditures without compromising access or quality.

CAPITATION

Medicare payment for medical services through capitation arrangements currently offers an alternative to the fee-for-service system for a relatively small segment of Medicare beneficiaries. With the growth in capitated plans and increases in enrollment among the general population, the number of Medicare enrollees in such plans also can be expected to grow.

In the past year the Commission has focused its efforts on selected issues pertaining to the quality of care in HMOs and certain aspects of the payment mechanism that may contribute to problems in accessibility.

Quality of Care in HMOs

Key issues regarding the quality of care in HMOs include possible inappropriate use of services, particularly the underuse of services, as a result of improper use of financial risk arrangements at the level of individual physicians, and the adequacy of Medicare's current quality assurance activities. The Commission recommends that all HMOs participating in the Medicare risk contracting program be subject to a periodic accreditation process that focuses particularly on internal quality assurance programs and physician compensation arrangements. Also, regulations should be developed to require HMOs with risk-sharing contracts to provide physicians with detailed information regarding financial risk arrangements and beneficiaries with educational material regarding characteristics of HMOs that may influence patient care either positively or negatively.

Payments to HMOs

The prospective payment mechanism employed by HCFA to pay risk-sharing plans fails to provide appropriate, equitable levels of payment to certain HMOs. The best short-term solution to payment problems stemming from differences in patient mix is the incorporation of a health status adjustment (for example , Diagnostic Cost Groups) into the current per capita payment mechanism. While some additional research is needed to refine the adjustment, a lengthy demonstration is unnecessary. Incorporating a health status adjustment should be done in concert with improvements in the actuarial process used to calculate Medicare per capita payments to HMOs, since this process currently has the potential to seriously distort payment levels.

Geographic variability in payments has probably discouraged some HMOs from entering into Medicare risk-sharing contracts, thus reducing beneficiary access to HMOs in certain geographic areas. A floor or lower limit should be established for county-specific payments. The Commission will assess the impact of alternative methods of establishing such a floor in the coming year.

MEDICARE DATA

Some changes in the Medicare Part B data system will be necessary to support both the continued development of current program management and implementation of alternative payment mechanisms. Adoption of a fee schedule may involve changes in the definition of certain types of data currently collected or the collection of new types of data. If implemented, a program of expenditure targets would probably require the designation of certain geographic boundaries and the collection of data specific to these geographic units.

The ability of the Health Care Financing Administration, carriers, providers, and beneficiaries to respond to changing data requirements is an important consideration in assessing the feasibility of any alternative payment mechanism and establishing a schedule for implementation. Changes involving the submission of additional data, the redefinition of currently submitted data, or systems modifications may require several years or more to implement and may involve substantial expenditures. Consequently, thorough advance planning and realistic goals, are prerequisites.

During the coming year, the Commission will conduct a planning process to identify the specific changes in the Medicare Part B data system required to support the various physician payment mechanisms under consideration.

CHAPTER 1 INTRODUCTION

The Physician Payment Review Commission (PPRC) was created by Congress to make recommendations for reform in Medicare payments to physicians. In its first report in 1987 it charted a direction for program reform. This report describes the Commission's work since that time in both shaping long-term options for reform and taking steps consistent with those options through refinements in current policy.

Medicare is the nation's largest payer of medical bills in an industry of over $450 billion. The health sector has experienced rapid growth in biomedical knowledge and medical technology, in health facilities and health personnel, and in the health expenditures that have accompanied the increasing use of these resources. The expansion of the health sector is a success story in responding to the needs for biomedical research, shortages of hospital beds and physicians, and inadequate health insurance coverage over the past 40 years, but the unrestrained increases in health care costs threaten to overshadow these accomplishments as the government, employers and insurers find it increasingly difficult to pay the price.

In recent years, concern over rising health expenditures has focused on payment for physicians' services. The costs of physician care have increased more rapidly than those for hospitals and, after a period of some moderation in expenditure trends, spending for physician services once again has accelerated. The pressure to find a way to constrain the growth in physician spending was underscored by recent announcements of a major increase in the premium paid by Medicare beneficiaries for coverage of physician services and equally large increases in health insurance premiums in the private sector.

There has been a growing consensus among public and private payers that further controls on the price of physician services will by themselves be of only limited effectiveness in moderating the increase in expenditures. Much of the recent rapid growth in physician spending can be attributed to an increase in the volume of services, suggesting that payment reform must focus equally on setting appropriate payments and developing methods to improve the appropriate use of services. The Commission is developing an integrated strategy directed at these policy goals.

A fee schedule for Medicare can standardize payments and rationalize incentives that influence physicians' choices about where to practice, what specialty to choose and what services to provide. But changes in payment policy must be coupled with efforts to encourage more appropriate use of services. Only by increasing the efficiency of care can expenditure growth be constrained without reducing access or quality of care and without shifting financial burdens to beneficiaries.

The Commission recognizes the need to consider physician payment reform in a broader context of health system reform to develop recommendations that reinforce policy goals extending beyond the scope of its work. Physicians'

decisions shape the delivery of care throughout the health care system and in turn are influenced by the structure and financing of that system. The health care the elderly receive is shaped by an emphasis on acute care in the current structure and financing of health services. In developing its recommendations, and working with others responsible for policies that overlap with the financing of physicians' services, the Commission will consider approaches that foster access to services that are most appropriate to the health care needs of the elderly.

The Commission's work in the past year has focused on key elements in the design of a fee schedule and a strategy to encourage the appropriate use of services. The Commission makes several recommendations in this report, but it also devotes much of the discussion to issues on which it is not yet ready to make recomendations and to the range of options that it will be considering in the next year.

The Commission called for the development of a fee schedule for Medicare in its first report to Congress.[1] It has now moved well into the conceptual and technical work to develop a proposal. It has concentrated on understanding the effects of current Medicare policies, exploring policy options, and resolving technical design questions.

The Commission's work on longer-term reform has shaped its advice on short-term policy changes. In its advice to Congress in June 1987, it recommended that congressional budget objectives be met through short-term policy changes that moved in the direction of the long-term reform it expects under a fee schedule.

The Commission also has given high priority to improving the appropriate use of services, seeking ways to limit the growth of expenditures without reducing the quality of care. Its work in this area encompasses several approaches including improving the information base for guiding clinical decisions and reviewing utilization, strengthening review mechanisms, and providing incentives for more appropriate use of services. A fee-for-service payment system encourages the provision of services, even those of minimal benefit to the patient.

GOALS FOR PHYSICIAN PAYMENT POLICY

In its first report, the Commission established a set of goals for physician payment policy that would guide it in making recommendations for change. Those goals provide a framework for assessing the performance of the current Medicare payment system and confirm the Commission's commitment to design sound policies that respond to problems confronting the Medicare program in ways that protect and build on the program's achievements. The Commission's goals are:

Access to Care. Reforms in the methods for paying for physicians' services must ensure that all beneficiaries have access to medical care. In the short run, access reflects physicians' willingness to care for Medicare patients and

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[1] The report, *Medicare Physician Payment: An Agenda for Reform*, was issued on March 1, 1987.

patients' abilities to afford the care. In the long run, access also depends on the supply of physicians and their choices of location and specialty. For those beneficiaries electing to continue to receive care through the fee-for-service system, free choice of physician must be maintained.

Quality of Care. Reforms in the methods or levels of payment should maintain or improve the quality of care provided to Medicare beneficiaries. Beneficiaries should receive high quality care provided through efficient medical practice.

Financial Protection for Beneficiaries. Reforms in payment to physicians should maintain financial protection for beneficiaries. While some patient financial responsibility for the cost of care may be appropriate, levels of responsibility should not be so high that they prevent beneficiaries from gaining access to care or impose significant economic hardship. The Commission is particularly concerned with limiting the responsibility of beneficiaries for charges in excess of what Medicare allows.

Equity among Physicians. Reforms in the levels or methods of payment should increase equity among physicians, so that similar payments are made for similar services among similarly qualified physicians. Differences in payments for different service should broadly reflect relative costs, market conditions, and other appropriate factors.

Reduction in the Growth of SMI Outlays. Reforms in physician payment should slow the growth in federal outlays for Supplementary Medical Insurance. The growing burden on taxpayers, who underwrite 75 percent of program costs through general revenues, and beneficiaries, who underwrite 25 percent of the cost through premiums, is becoming an increasingly serious problem. One way to address the fiscal problem without shifting it to others is to encourage increased efficiency in the practice of medicine. This can be achieved through more appropriate payment incentives to physicians, improved review of how services are used, expanded research, and better education of physicians and beneficiaries. In evaluating policy changes that reduce outlays in Part B of Medicare, the potential for offsetting increases in outlays for Part A of Medicare must be considered.

Understandability. Reforms should make the method of paying physicians easier for beneficiaries, physicians, and the general public to understand. Physicians should know what charges Medicare will allow, and beneficiaries should be informed by physicians what they are expected to pay. Where feasible, this information should be provided before service is delivered.

Orderly Change. Reforms in the method of payment should be orderly and coherent. Short-term change should be consistent with long-term policy goals. The feasibility of administering the specific changes must be taken into account, especially in setting schedules for their implementation. As major reforms are implemented, monitoring their effects should be given high priority because these effects are uncertain and midcourse corrections may be required.

Pluralism. Reforms in payment methods should accommodate the various ways health services are organized. Both fee-for-service methods and capitation should play a role in the delivery of medical care in the United States.

Early in its deliberations, the Commission came to three basic conclusions that will guide it in making recommendations. First, it acknowledged that trade-offs among goals are inevitable, but it affirmed that protection of beneficiaries is not to be sacrified. Second, it concluded that relative payment levels for different services send important signals to physicians that may encourage or discourage socially desirable choices about what services to provide, where to locate, and what specialty to select. Third, it affirmed that some uncertainty in medical practice is inevitable. This uncertainty complicates the policy challenge of balancing society's concerns about efficient use of resources with the physician's responsibility to exercise clinical judgment on behalf of the individual patient.

RECOMMENDATIONS IN THE 1987 REPORT

The recommendations contained in the Commission's first report dealt with both immediate and longer-term directions for reform. The key long-term recommendation was that Medicare move toward a fee schedule for paying physicians.

Fee Schedule

The Commission concluded that Medicare's existing customary, prevailing, and reasonable (CPR) method of paying physicians was sufficiently flawed that it should be replaced by a fee schedule, rather than modified.[2] The CPR method has

- encouraged fee inflation and excessive use of services;
- resulted in distorted prices that have led to inappropriate patterns of medical care and inequities among physicians; and
- become administratively complex and difficult for both physicians and beneficiaries to understand.

The Commission noted that a properly designed fee schedule would provide better incentives for appropriate medical care and reduce the complexity faced by program participants and managers. While the details of the fee schedule were not discussed, the report made clear the Commission's intention of proposing a fee schedule in which the relative payments for different services and for the same service in different geographic areas would be changed significantly from current patterns. The Commission set its work plan for the coming year to begin to address the major design issues related to the fee schedule.

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[2] Under CPR, payment for a service is limited to the lowest of (1) the physician's actual charge; (2) the physician's customary charge for the service (defined as the physician's median charge for the service during a prior 12-month period); or (3) the prevailing fee for that service in the community, currently set at the 75th percentile of customary charges of all physicians in the community.

Geographic Variation

The Commission expressed concern that geographic variation in payment may cause problems for beneficiary access in some rural and low-income urban areas and be unfair to physicians practicing in those areas. It recommended a payment increment for primary care services provided in underserved areas and promised intensive attention to geographic variation in the coming year.

Inherent Reasonableness

The Commission endorsed the goals of the approach specified by Congress to make adjustments in existing payments for specific medical services based on assessments of their "inherent reasonableness." At the same time, it noted that the data requirements of the regulatory process specified by Congress for defining inherent reasonableness would limit the extent to which the process could be used to make such adjustments. So, the Commission proposed to evaluate the potential of using a consensus process for developing recommendations for changes in payment and, in the meantime, to respond to requests for advice during congressional budget deliberations by comparing Medicare relative payments with available relative value scales based on resource costs or the professional judgment of physicians.

Assignment and the Participating Physician Program

In recent years, Congress has acted to strengthen beneficiary access to physicians who accept Medicare allowed charges as payment in full. The Commission proposed a period of monitoring and evaluation to assess the results of these recent policy changes. Effective beneficiary education about the program and timely claims processing for participating physicians were indicated as matters for future Commission attention.

Program Administration

Recognizing the importance of sound program management to improving the payment system, the Commission emphasized the need for administrative funding to reflect program complexity and scope, reasonable flexibility for carriers in allocating funds to areas of most productive use, and stronger evaluation of carrier performance.

Coding

As a condition for effective implementation of a fee schedule the Commission recommended refining and standardizing the definitions of procedure codes for medical and surgical services. It proposed to use a consensus process to draw on the professional judgment of physicians and other experts in developing its recommendations.

Assistance at Surgery

The Commission recommended that Medicare limitations on payments for assistants at surgery be supplemented with additional guidelines. It suggested that an assistant at surgery be defined as an individual who has the necessary qualifications to participate in the particular operation and actively assists in

performing the surgery. The Commission stated its plans to work with surgical experts to develop practical guidelines for determining the need for such assistance.[3]

Data

The Commission noted the importance of good data to developing, implementing and evaluating reforms in physician payment policy. It proposed to work with the Health Care Financing Administration (HCFA) and other agencies on planning improvements in data scope, quality, and timeliness.[4]

The Commission circulated its report widely to members of Congress and their staffs; to those responsible for Medicare policy in the administration; to organizations representing physicians, beneficiaries, and other interested groups; and to policy scholars. The report generated many favorable comments and led to useful advice from a number of interested parties.

SPECIFIC ADVICE TO CONGRESS ON BUDGET RECONCILIATION

Soon after the 1987 report was released, the committees with jurisdiction over Medicare asked the Commission to advise them on how to meet the fiscal year 1988 budget objectives they expected to be set for the Medicare program as part of the congressional budget process. The Commission considered options that could be implemented quickly enough to reduce anticipated increases in physician payments during fiscal year 1988. After holding hearings on these options, it developed its recommendations, guided by the principle that short-term policy changes should move the payment system in the direction of long-term reform.[5]

The Commission recommended that some of the budget savings be derived from a reduction in the amount by which fees could be updated according to the Medicare Economic Index (MEI) that is used to limit annual increases in prevailing charges. To move the system toward a more rational pattern of

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[3] While this issue is not addressed in the current report, the Commission has begun working with the American College of Surgeons and other groups to define when physicians are needed to assist in surgical procedures.

[4] The Commission considered one additional issue, the rebasing of the Medicare Economic Index (MEI) to a more recent year, and noted that it would examine possible approaches and their implications. After further analysis it did not pursue this work because the changes that would be produced would be too extensive to represent an interim step toward a fee schedule.

[5] The Commission's recommendations were summarized in testimony by Philip R. Lee, M.D., before the Subcommittee on Health and the Environment, Committee on Energy and Commerce, U.S. House of Representatives, on June 15, 1987, and by Uwe R. Reinhardt, Ph.D., before the Committee on Finance, U.S. Senate, on July 9, 1987.

relative payments and to protect beneficiary access to care, however, the Commission proposed that primary care services be exempted from the reduction.[6]

The Commission developed a methodology to identify procedures most overvalued by Medicare and recommended modest reductions in prevailing charges for them. The Commission noted that such reductions were likely to be consistent with the changes in relative payments that would occur under a fee schedule.

The methodology employed by the Commission compared relative payments by Medicare with relative value scales that had some of the attributes of the scale the Commission envisions for its fee schedule reform (See the appendix to this chapter for a detailed description of the methodology). The scales selected were those at least partially based on resource costs and those that were developed with a substantial amount of physician input.

The Commission initially identified eight procedures meeting the criterion that their relative values under Medicare be consistently higher than those in each of the other relative value scales, and substantially higher in most.[7] When additional data became available, the Commission extended the analysis, upon congressional request, and identified five more procedures that met the criterion.[8] For each of the overvalued procedures, the Commission cautioned that any reductions in prevailing charges should not apply in localities that already had relatively low charges, defined as those with prevailing charges below 75 percent of the national mean for the procedure.

The Commission reiterated its recommendation that Congress consider a payment increment for primary care services delivered in specified underserved areas and elaborated on a methodology for designating eligible areas.

In addition to recommending the above options, the Commission commented on several other proposals under consideration by Congress. The administration had proposed that Medicare pay for inpatient services of radiologists, anesthesiologists, and pathologists (RAPs) on the basis of diagnosis related groups (DRGs). While the Commission expressed its concern about specific problems associated with certain characteristics of these services, it did not find that using RAP-DRGs was the most effective way to address the problem. It noted that DRG payment would place RAP physicians at financial risk for utilization of inpatient services determined largely by other physicians, and that many RAP services occur in outpatient settings not covered by this proposal. The Commission advised Congress that it would continue to examine the problems associated with payment for RAP services, looking particularly at

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[6] Primary care services were defined as office visits, nursing home visits, and home visits.

[7] The procedures identified were coronary artery bypass surgery, total hip replacement, cataract extraction with intraocular lens implant, intraocular lens insertion, suprapubic prostatectomy, transurethral resection of the prostate, diagnostic dilatation and curettage, and carpal tunnel release.

[8] The additional procedures were knee arthroscopy, knee replacement, broncoscopy, upper gastrointestinal endoscopy, and pacemaker insertion.

determining appropriate prices through a fee schedule and the implications for assignment policy of the limited ability of beneficiaries to choose among RAPs and other hospital-based physicians.

The Commission did not endorse an administration proposal to limit the customary charges for new physicians to 80 percent of the prevailing charge, a proposal inspired by concern that existing policy had inadvertently resulted in new physicians often receiving higher payments than those who were established. The Commission noted that differentiating among physicians on the basis of experience would not contribute to long-term reform and was not supported by any of the physician groups that testified before it. It recommended, however, that primary care services be exempted if such an option were adopted.

Finally, the Commission cautioned against meeting budget targets by reducing prevailing charge screens in geographic areas with relatively high charges. While such an approach would, in principle, have been consistent with the Commission's directions for long-term reform, the technical issues of implementing such policies severely limited their feasibility. The Commission stated its intent to conduct extensive analyses of geographic variation in charges during the next year and also pointed to work under way at HCFA to develop a cost-of-practice index, to understand variations in carrier coding practices, and to improve the reliability of national Part B claims files. It felt that significant changes in the pattern of geographic variation should await completion of this work.

Much of the Commission's advice was reflected in provisions of the Omnibus Budget Reconciliation Act of 1987.[9] The Commission also began to advise Congress on approaches to controlling Part B expenditure growth in response to congressional concern over the increasing burden of Part B outlays on beneficiaries and taxpayers.[10] The Commission expects to continue to work closely with Congress, to provide timely and relevant advice on physician payment policy.

OVERVIEW OF 1988 REPORT

This year's report provides detailed analyses of issues raised in 1987, introduces additional issues that the Commission took up during the course of the year, and charts new policy directions. Like the Commission's first report, this one emphasizes reform of fee-for-service payment for physicians under the Medicare program, particularly through the implementation of a fee schedule. The

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[9] Among the major provisions related to Medicare physician payment adopted by the Congress were differential increases in prevailing charges for primary care services (3.6 percent) and for other services (1.0 percent) in fiscal year 1988, reductions in prevailing charges for the list of procedures identified by the Commission as most likely to be overvalued by Medicare, and an incentive payment of 5 percent for physician services in rural health manpower shortage areas.

[10] The Commission's advice was incorporated into testimony by John M. Eisenberg, M.D., M.B.A., before the Committee on Ways and Means, U.S. House of Representatives, on September 30, 1987.

Commission has broadened the scope of its work, however, in two important ways that are reflected in parts of the report devoted to the utilization, cost, and quality of services and to key issues related to the capitation option under Medicare.

The next chapter presents an overview of the Medicare program and describes the context within which physician payment reform is being considered. It illustrates the need for reform and provides a framework for the analyses undertaken by the Commission in the past year.

Part I: Progress Report on the Development of a Fee Schedule

Part I of the report summarizes the Commission's progress in developing a fee schedule. Chapters 3 through 7 address specific issues related to the development of a fee schedule: examining alternative bases for a relative value scale, standardizing definitions of procedure codes for global services and for visits, determining when specialty differentials should be applied, and discussing the components of geographic multipliers used to adjust payments from one area to another.

Chapters 8 through 11 discuss issues that are integral to the development of a fee schedule but also could lead to recommendations for change before its implementation. For example, the Commission's work on geographic variation both enhances our understanding of current payment patterns and provides the basis for assessing the extent to which payment levels under alternative fee schedule options will differ from current patterns. The Commission has conducted extensive analyses of the geographic variation in Medicare charges during the past year, including analyses to determine how much of that variation could be explained by differences in practice costs. It reports the results of that analysis in chapter 8, along with the short-term recommendation to increase payments for primary care services in areas where prevailing charges, adjusted for practice costs, fall below a fixed percentage of the national mean prevailing charge.

Chapter 9 describes current Medicare policies on assignment and balance or extra billing, and their impact on beneficiaries and physicians.[11] Chapter 10 describes the range of options to increase the assignment rate and to improve beneficiary protection from charges exceeding Medicare allowed amounts both within the framework of current policies and with the implementation of a fee schedule.

The last chapter in part I focuses on issues associated with determining payment for diagnostic services that involve a large technical component and a relatively small physician component. It describes plans to analyze the costs associated with the technical aspects of these services in order to develop recommendations for interim changes in reimbursement policy and for setting relative values for these services in a Medicare fee schedule.

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[11] See chapter 9 for a discussion of the use of the terms balance billing and extra billing.

Part II: Utilization, Cost, and Quality

The Commission assumes that by reducing the financial incentives to provide one service instead of another, a fee schedule will contribute to more appropriate and efficient use of services. At the same time, it recognizes that the inherently inflationary nature of fee for service requires more than adjustments in relative prices to check incentives for increased use.

The Commission's work related to the utilization, cost, and quality of services focuses on three broad areas: strengthening the capability for utilization and quality review, improving the information base on appropriate use of services to inform physicians and patients and to improve review of services, and providing financial incentives for appropriate use of services. Chapter 12 describes current Medicare utilization review activities and proposes actions to strengthen Medicare's capacity to manage the use of services.

The next two chapters consider longer-term ways of promoting more appropriate service use that the Commission feels merit further attention. Chapter 13 focuses on two methods of providing physicians with clinically relevant information to guide their decisions on appropriate patient care: feedback to physicians on their utilization patterns compared with their peers, and practice guidelines. Chapter 14 turns to one approach that gives physicians a collective financial incentive to encourage more appropriate use of services: expenditure targets.

Part III: Capitation

In its 1987 report to Congress, the Commission raised a number of issues related to the capitation option available to Medicare beneficiaries. The Commission began its work on capitation during the past year by focusing on the two major issues discussed in depth in Part III of this report. Chapter 15 examines the quality of care in plans receiving Medicare capitation payments, discussing both accreditation of plan mechanisms to ensure quality and issues related to financial incentive arrangements for plan physicians. Chapter 16 describes current limitations in the adjusted average per capita cost method for determining capitation payments and recommends changes to improve the calculations of per capita payments.

Part IV: Data

The last chapter of the report is devoted to Medicare data needs for program management, review, and evaluation. It describes current data collection activities and points out where they could be strengthened. Further, it discusses the information requirements and systems implications of starting and updating a fee schedule. In anticipation of a fee schedule, the chapter specifies a work plan calling for a coordinated effort between the Commission and HCFA to define the data needs and identify strategies for modifying current systems to incorporate changes required by a fee schedule.

The report reaches conclusions on some of the issues the Commission has examined in the past year and describes the progress it has made to lay the groundwork for decisions in the coming months. It also begins to frame major issues that it will consider in the year to come. As we look to the future, all these elements will be drawn together in the design of a fee schedule and development of an integrated approach to controlling growth of expenditures while maintaining quality of care.

APPENDIX 1

OVERVALUED PROCEDURES

To assess whether a procedure is overvalued by Medicare relative to other procedures, Medicare relative values were compared with relative values from several other sources. This Appendix describes the methods used, including selection of procedures for study, selection of relative value scales for comparison, the source of the data used to compute Medicare relative values, and the criteria for selection of overvalued procedures. The results of the analysis are summarized in the table 1-A-1.

SELECTION OF PROCEDURES TO STUDY

The comparison was restricted to those procedures for which data on Medicare relative charges are available. Two sources were used: 1984 Medicare data from four states for a small number of procedures from a study by Mitchell and Stason (1986), and 1985 Medicare data for a larger set of procedures. These data are described in more detail below under "Source of Medicare Relative Values."

The initial analysis used 1984 Medicare data and focused on thirty-six procedures for which resource-based relative values were available from a study by Hsiao and Braun (1985). This analysis resulted in the identification of eight procedures as overvalued. The 1985 Medicare data were then used to confirm the initial analysis with national data and to extend the analysis to several hundred additional procedures. The procedures studied do not include any procedures thought most likely to be undervalued by Medicare such as office and home visits.

SELECTION OF RELATIVE VALUE SCALES FOR COMPARISON

Medicare relative values were compared to existing relative value scales (RVSs) that have some of the attributes of the relative value scale that the Commission envisions as a part of long-term payment reform. This eventual RVS is expected to be based in part on resource costs, to reflect market conditions, and to have substantial input from physicians. The five RVSs chosen for comparison are not based entirely on charges, and each was developed with substantial input of expert opinion of physicians and others as to appropriate relative payment for procedures.

The five RVSs are referred to here by the abbreviations used in the table. Several were obtained under an agreement of confidentiality. "INS 1 RVS" and "INS 2 RVS" are based on schedules of maximum payments currently used by two large insurers. Neither is simply a reflection of current or past charges. Each was developed by the insurer with expert physician input as to appropriate relative payment levels for procedures based on factors such as relative time, effort, difficulty, and skill required. Each schedule has been used to set maximum payments for physician services for several years.

"GRP 1 RVS" is based on a schedule of maximum payments developed by physicians in a large group practice. It has been used for several years by this physician group for fee-for-service reimbursement under negotiated contracts with a number of insurers. It has also been adopted by other physician groups.

The "ONTARIO RVS" is based on the current schedule of fees developed by the physicians of the Ontario Medical Association (OMA). It is used for payment of physician services in Ontario. The relative value scale is determined through negotiation among the physicians in the OMA.[1] We used the schedule in effect in 1987.

The "HSIAO RVS" is based on the 1985 Hsiao-Braun study referenced earlier (Hsiao et al., 1985). The method used in this study was similar to Dr. Hsiao's present study in cooperation with the American Medical Association and a number of specialty societies (Hsiao et al., 1987). Relative values were assigned to physician services on the basis of physicians' judgment of relative resource costs including time and effort, skill, risk, and judgment required. Dr. Hsiao has stated that he has confidence in the results of the study, though the error for an individual value may be as high as 25 percent.

Well-known RVSs such as the California RVS and the Florida RVS have not been used. The relative values in the 1986 Florida RVS are simply the medians of charges submitted to Blue Shield of Florida, so are based entirely on past physicians' charges. The most recent California RVS is about 15 years old.

SOURCE OF MEDICARE RELATIVE VALUES

The relative values for Medicare were based on average allowed charges from two sets of data: all Medicare claims in four states (Alabama, Wisconsin, Washington, Connecticut) in 1984 as calculated by Mitchell and Stason, and the five percent national sample of 1985 Medicare charges from the 1985 Medicare BMAD Beneficiary File.[2] This was the best data available on Medicare charges.

There are several choices for which Medicare charges are used for Medicare relative values, including average allowed amounts (average allowed charges), average submitted charges, and prevailing charges. Since prevailing charges vary by location and specialty, one would have to select which prevailing

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[1] Several physician groups testified that the Ontario fee schedule is not appropriate for comparison in this study because it is not used in the United States. If it were excluded from the comparison, the results would not change significantly.

[2] The 1984 data used were from a 100% sample of Medicare claims in Alabama, Connecticut, Washington, and Wisconsin. The 1985 data are from a national sample representing all claims submitted for five percent of beneficiaries. The four states from which the 1984 data were gathered were selected to represent four regions of the country. Both the 1984 and 1985 data include charges of all specialists who provided the service and of both urban and rural physicians. The data were first "cleaned" to eliminate duplicate and denied claims. Average allowed amounts were then calculated for each procedure.

charges to use, or to average them in some way. We did not have the data to do this. As an alternative, we chose to use average allowed amounts, which reflect what Medicare actually pays physicians.[3] Though each number represents an average over all specialists submitting charges for each procedure, the bulk of claims submitted for most of the procedures included in this study are from one specialty.

CHOICE OF INDEX PROCEDURES

In order to compare relative values in different RVSs, the several scales must be "linked" by setting one procedure or a combination of procedures to the same relative value in all scales. The usual choice for a "linking" or index procedure is a common procedure with a stable technology and stable relative value such as cholecystectomy, inguinal hernia repair, or appendectomy. The comparison here used a composite of these three procedures, each weighted by its importance in Medicare. The weights are approximately 45 percent for cholecystectomy, 50 percent for hernia, and 5 percent for appendectomy, reflecting the relative Medicare expenditures for these services in 1984. The use of a composite index procedure minimizes any possible influence of an unusual value for a single index procedure in any of the relative value scales.

CRITERIA FOR SELECTION OF "OVERVALUED" PROCEDURES

A procedure is considered relatively "overvalued" by Medicare if its Medicare relative value is consistently higher than its relative value in the other five relative value scales. That is, its relative value under Medicare must be higher than in each of the other RVSs, and substantially higher compared to most of them. Several hundred procedures were compared. Those which appeared to meet the criteria for overvalued procedures are in table 1-A-1.

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[3] The allowed amount is the amount Medicare pays the physician. It is the least of the actual charge, the customary charge, and the prevailing charge for each claim.

Table 1-A-1: Comparison of Relative Values for Overvalued Procedures

Procedure Description	Medicare RVS	Ins 1 RVS	Ins 2 RVS	Grp 1 RVS	Ontario RVS	Hsiao RVS
Arthroscopy, knee	1.49	1.06	0.89	0.71	0.88	1.33
Arthroplasty, knee	2.60	--	1.77	1.77	--	--
Bronchoscopy, diagnostic	0.40	0.29	0.36	0.29	0.32	--
Bronchoscopy with biopsy (rigid)	0.46	0.29	0.36	0.24	0.32	--
Bronchoscopy with biopsy (flexible)	0.51	0.29	0.36	0.19	0.32	--
Carpal tunnel repair	0.77	0.43	0.75	0.64	0.44	0.50
Cataract removal, lens implant	2.36	2.13	1.77	2.09	1.57	1.39
Coronary artery bypass	6.43	4.54	3.76	4.02	3.89	4.89
Dilatation & curettage, diagnostic	0.39	0.26	0.31	0.32	0.26	0.33
Endoscopy, Upper GI[a], diagnostic	0.45	0.29	0.33	0.34	0.26	--
Endoscopy, Upper GI, with biopsy	0.52	0.35	0.38	0.39	0.26	--
Hip replacement, total	3.58	2.75	2.70	2.41	1.42	2.23
Intraocular lens implant	1.53	0.97	1.11	--	0.93	0.94
Knee replacement, total	3.58	2.75	2.66	3.21	1.80	--
Pacemaker[b], atrial	1.55	--	0.97	--	0.91	--
Pacemaker, ventricular	1.58	1.56	1.15	1.45	0.91	1.03
Pacemaker, atrioventricular	1.99	--	1.48	--	1.27	--
Suprapubic prostatectomy	1.91	1.46	1.11	1.61	1.30	1.42
Transurethral resection, prostate	1.78	1.46	1.11	1.61	1.27	1.29

Source: See Text

a. GI refers to gastrointestinal.
b. Pacemaker: Insurer 1, Group 1 and Hsiao do not have separate codes and relative values for the three pacemaker procedures, so the single relative values for each of these RVSs is to be compared to each of the three Medicare relative values, or to an average of the three.

CHAPTER 2 THE CONTEXT FOR REFORM

The Physician Payment Review Commission (PPRC) was established by Congress because of the growing consensus among physicians, Medicare beneficiaries, and government officials that there was a need to reform physician payment in the Medicare program and to forge a consensus on the elements of that reform. Pressure for reform flows from many sources. Perhaps most prominent is the continued rate of increase in Medicare expenditures, but equally important are the erosion of financial protection for beneficiaries, fears that efforts to control expenditures will diminish beneficiary access to services or reduce the quality of care provided, inequitable payment rates for physicians, and excessive program complexity.

To provide a context for considering changes in current physician payment policy, this chapter presents an overview of the Medicare program and describes the trends in health expenditures affecting Medicare, the use of health services and financial liability of its beneficiaries, and the physicians who provide care to Medicare patients. Because the problems of finding ways to control rising costs that do not diminish access to appropriate services are not unique to the Medicare program, this chapter ends with a brief description of developments in the private sector.

STRUCTURE OF THE MEDICARE PROGRAM

Enacted in 1965, Medicare is a social insurance program that finances health care services for 32 million elderly and disabled persons. The program has two parts. Part A, the Hospital Insurance (HI) program, provides inpatient hospital coverage and limited home care and skilled nursing facility benefits. Part B, the Supplementary Medical Insurance (SMI) program, covers the costs of physician services and such additional benefits as outpatient laboratory tests, durable medical equipment, and outpatient hospital care.[1]

Most Americans age 65 and older are entitled to receive hospital insurance benefits under Medicare Part A, and 97 percent of those with Part A also have chosen to enroll in the SMI program, paying a monthly premium for Medicare Part B coverage.[2] Medicare also covers nearly 3 million disabled persons. During the 1980s, the number of Medicare elderly enrollees has grown just over 2 percent annually. The rate is expected to accelerate sharply around 2010 as the baby-boom generation begins to reach age 65.

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[1] Medicare Part B covers only specified services of dentists, podiatrists, optometrists, and chiropractors. It also makes payments to the employers of physicians' assistants and nurse practitioners for specified services provided by these health professionals.

[2] Those elderly who are not eligible for Medicare Part A, based on their previous Social Security or Railroad Retirement payroll tax payments, have the option of obtaining Part A coverage by paying a monthly premium. Anyone older than age 65 also can enroll in the SMI program.

Medicare pays primarily for acute care services. It does not cover such major expenses for the elderly as long-term care, prescription drugs, and dental services. Other services, such as outpatient mental health services, have benefits so limited that they provide only minimal coverage. With current benefit exclusions and cost-sharing requirements, Medicare payments meet slightly less than half the total health care costs of the elderly.

The Medicare Part A Hospital Insurance Trust Fund is financed primarily through Social Security payroll taxes from employers, employees and the self-employed. The payroll tax rate for calendar year 1987 was 1.45 percent on an employee's compensation up to $43,800, with an equal contribution rate paid by employers. Under current policies and expenditure trends, increases in outlays for inpatient hospital services are projected to exceed trust fund income, leading to depletion of the trust fund by the end of the next decade (U.S. House of Representatives, Committee on Ways and Means, 1987).

The SMI program is financed by a combination of general revenues, beneficiary premiums, and trust fund interest. In Fiscal Year 1986, the contribution of general revenues to total SMI trust fund revenues was $18 billion. In recent years, beneficiary premiums have covered nearly a quarter of program costs (figure 2-1).[3] The monthly premium for SMI enrollees in 1988 is $24.80, or $298 a year, up from $36 a year in 1966, and 38.5 percent higher than the 1987 premium (figure 2-2).[4] In addition to the SMI premium, Medicare requires cost-sharing on covered services under both Part A and Part B (table 2-1).

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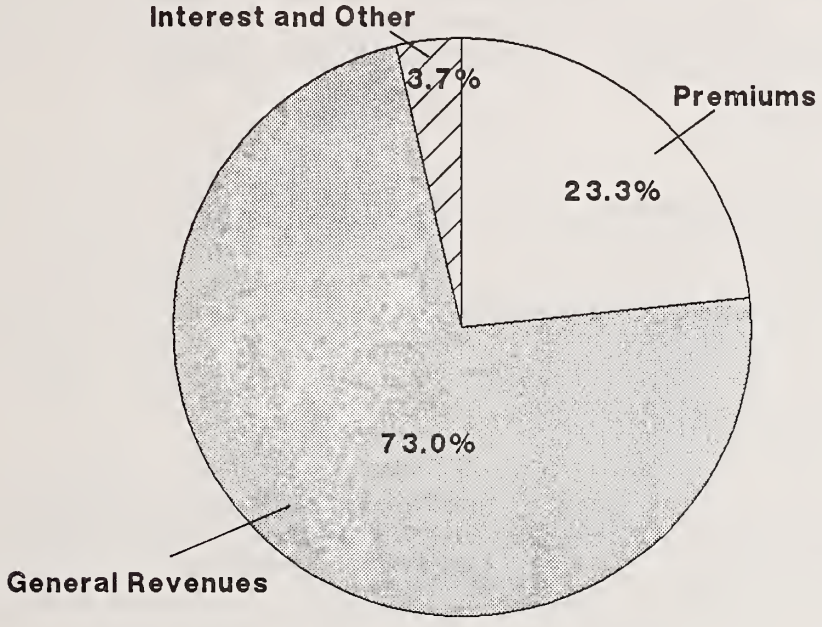
[3] Current law requires that the Part B premium be set at 25 percent of the average monthly benefit per aged enrollee. After 1988, the percentage increase in the premium cannot rise faster than the most recent cost-of-living adjustment in Social Security benefits.

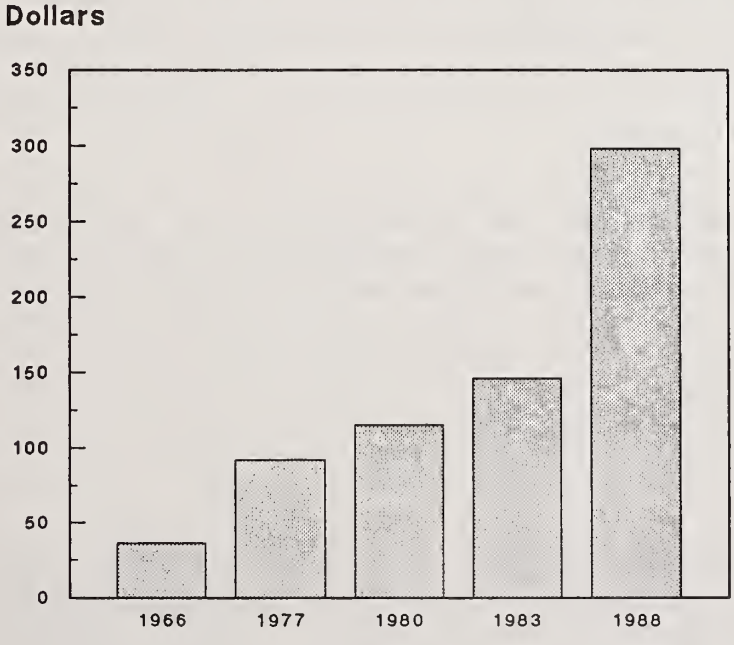
[4] Three factors contributed to the 38.5 percent increase in the Part B premium in 1988. 1) Projections of expenditures for 1987 proved too low and required an adjustment that accounted for 35 percent of the total premium increase. 2) Projected Part B spending increases in 1988 accounted for 43 percent of the increase. 3) A step to replenish the Part B contingency reserve fund accounted for 22 percent of the increase. Between 1984 and 1987, a surplus in the reserve fund was reduced by setting the Part B premium at an amount lower than would have been necessary to cover 25 percent of Part B costs. Higher than anticipated expenditures in 1987 reduced the reserve somewhat more than expected.

Figure 2-1. Supplementary Medical Insurance Trust Fund Revenues in FY 1987



Source: U.S. Department of the Treasury.

Figure 2-2. Medicare Part B Annual Premium, Selected Years, 1966-88



Source: Health Care Financing Administration.

Table 2-1. Cost-Sharing Under Medicare, 1988[5]

	Beneficiary Liability
Medicare Part A	
Hospital deductible	$540 per spell of illness
Hospital coinsurance, Days 61-90	$135 per day
Hospital coinsurance, 60 lifetime reserve days (non-renewable)	$270 per day
Hospital costs, days 151 and above	All Costs
Skilled nursing facility coinsurance, 21st - 100th day	$ 65 per day
Medicare Part B	
Premium ($24.80 per month)	$298 per year
Deductible	$ 75 per year
Coinsurance	20% of Medicare allowed charges
Charges in excess of Medicare allowed charges	All excess up to Medicare limits (For example, MAACS)

Since its inception, Medicare has paid for physician services through a method referred to as customary, prevailing, and reasonable (CPR), that determines the payment rate for each service on the basis of what the physician has charged in the past and what other physicians in the community charge.[6] The current fee structure under CPR has raised concerns about the extent of variation in payment levels. When the Medicare program was established, the CPR system was adopted in part because it recognized variations in charges for physician services. These variations were thought to reflect differences in patient preferences and physician behavior as mediated through established markets for physician services. If Medicare payments were to depart much from the going market rates, Medicare beneficiaries might not have access to care comparable to that of other Americans. Comparable access is an underlying principle of the Medicare program.

Over the two decades that CPR has been used, a set of relative values for medical services has evolved that is based partly on these historical fee patterns, partly on the introduction of Medicare fee constraints, and partly on carriers' discretionary definitions of geographic, specialty, and other payment subcategories. This process has resulted in wide payment differentials among types of procedures, localities, specialties, and sites of care that cannot be explained by documented differences in the costs of physicians' practices.

[5] Both Medicare Parts A and B do not pay for the first three units of blood and both have no coinsurance or deductible requirements for home health agency services. Under Part B, Medicare pays 50 percent of approved charges, up to a maximum of $250 per year, for outpatient physician services for mental illness. A maximum of $400 per year is set for physical therapy services.

[6] See the introduction to Part I for a complete discussion of CPR.

Although these differentials have not arisen from deliberate decisions to favor certain styles of practice on grounds of cost, quality, or access, they may nevertheless affect styles of practice because they often provide inappropriate financial incentives that influence such decisions as what services to employ in the care of patients, where to practice, and whether to specialize. These distortions can reduce access to care and quality of care as well as increase costs to beneficiaries and Medicare program expenditures. They have been criticized as being inequitable for both physicians and beneficiaries.

RISING FEDERAL OUTLAYS

Health care costs have continued to rise despite a variety of efforts to control them in the public and private sectors. In the 1980s, the rate of increase in national health care expenditures accelerated in relation to the GNP. In 1987, U.S. health expenditures reached an estimated 11.2 percent of GNP and are projected to reach 12 percent of GNP by 1990. Between 1975 and 1985, per capita health expenditures increased by over 11 percent a year in nominal terms, or 4.5 percent in real terms (Waldo, Levit and Lazenby, 1986).

Medicare outlays have also been increasing rapidly. Federal outlays for Medicare amounted to nearly $83 billion in fiscal year 1987. This represented about 8 percent of the entire federal budget and almost 2 percent of the gross national product. Spending increases for Medicare have made the program a major target of policy reform and budget control efforts. Medicare outlays increased at 15.5 percent a year between 1975 and 1987.

Long Term Trends in Part B Outlays

The fastest growing portion of Medicare, the SMI program, increased about 18 percent a year between 1975 and 1986. It is one of the most rapidly growing federal programs and currently accounts for about a third of total Medicare spending, approaching $31 billion in fiscal year 1987. Physician services accounted for about 75 percent of SMI expenditures, and have been increasing at nearly the same rate as total SMI expenditures. Although their services make up less than 25 percent of all Medicare spending, physicians may actually influence more than 70 percent of other medical services used by beneficiaries (Blumberg, 1979). Therefore, any reforms in the current payment method for physicians need to be considered in light of their more general consequences for health delivery and spending.

Initial analysis of Part B approved charges[7] between 1975 and 1985 separates the expenditure increase into increases in services per enrollee (44 percent of the increases), price increases (42 percent), and increases in enrollment (14 percent).[8]

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[7] The Part B Summary Record 5 Percent Sample is collected continuously by the Health Care Financing Administration (HCFA) and includes data on submitted and allowed charges and amount reimbursed by type and place of service. Records are prepared by carriers and are based on a 5 percent sample of beneficiaries. This data system is not often used for analytical purposes because of data reporting problems, particularly in the years before 1981. While year-to-year changes should be interpreted with caution, long-term trends appear to be reliable.

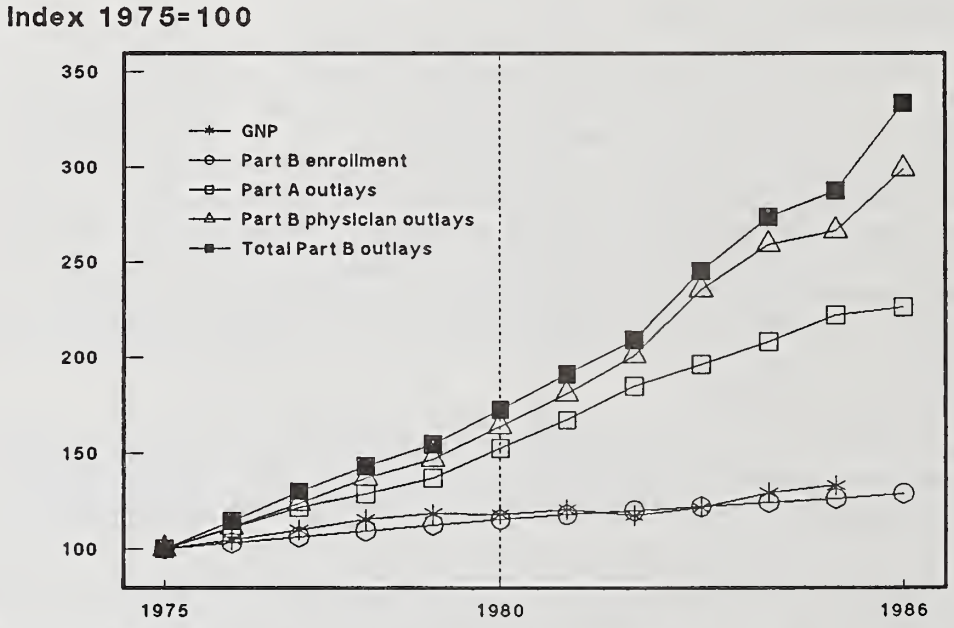
[8] PPRC analysis of unpublished data from the HCFA Five Percent Part B Bill Summary Record system.

Over 40 percent of the increases are the result of rising volume of services per enrollee. This rising volume, or intensity, may reflect many factors, such as the use of new technologies in diagnosis or treatment, the shift of services from inpatient to outpatient settings, other changes in physician and patient behavior, or simply changes in billing and payment procedures. Until further analyses are completed, it will be difficult to conclude what portion of the changes in volume represent actual changes in patient care, and what portion reflect changes in administrative and payment procedures.

Examination of trends in service utilization makes readily apparent the acceleration in overall volume after 1980 and the contribution of various component Part B services to the increases. Part B services per enrollee grew steadily between 1975 and 1985. The overall growth in Part B service volume of more than 7 percent per year outstripped the increases in either surgical procedures or physician visits in the general population. For the Medicare population, surgical services and clinical laboratory services experienced the fastest growth.[9]

Growth appears to have accelerated since 1980. Expenditures per enrollee for physicians' services grew much more rapidly between 1980 and 1986 than before 1980 (figure 2-3). Total service volume per enrollee shows a similar pattern (figure 2-4).

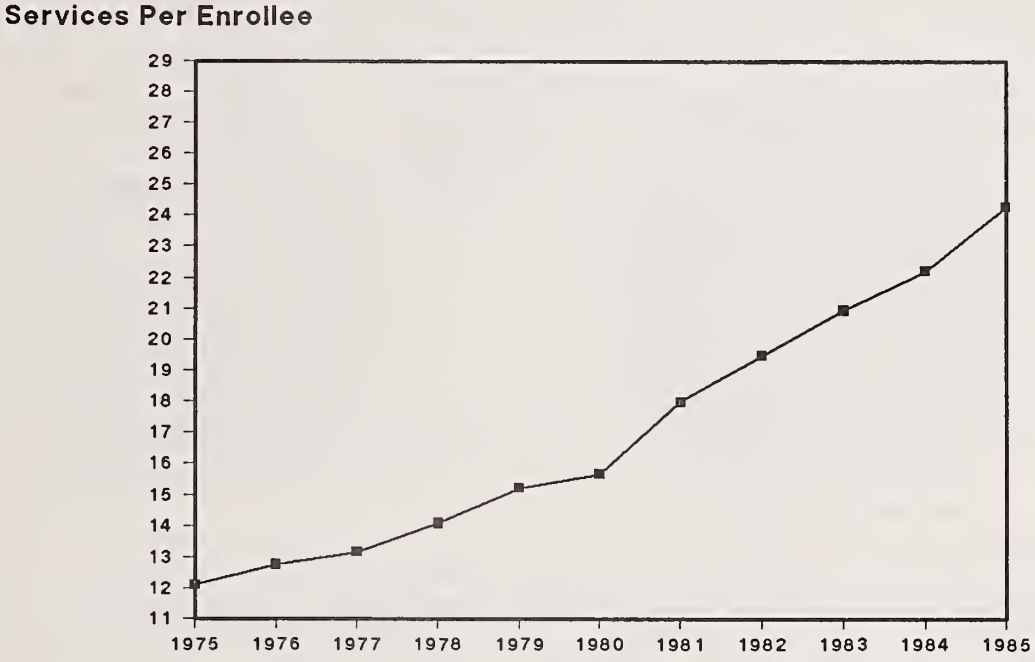
Figure 2-3. Trends in Real Medicare Expenditures, 1975-86



Sources: U.S. Department of Commerce and Health Care Financing Administration.

[9] The growth rates for these services were 7 percent per year for all surgical services, nearly 12 percent for office-based surgical services, and 8 percent for clinical laboratory services.

Figure 2-4. Total Part B Services per Enrollee, 1975-85 [a]



Source: Health Care Financing Administration, Medicare Part B Summary Data.

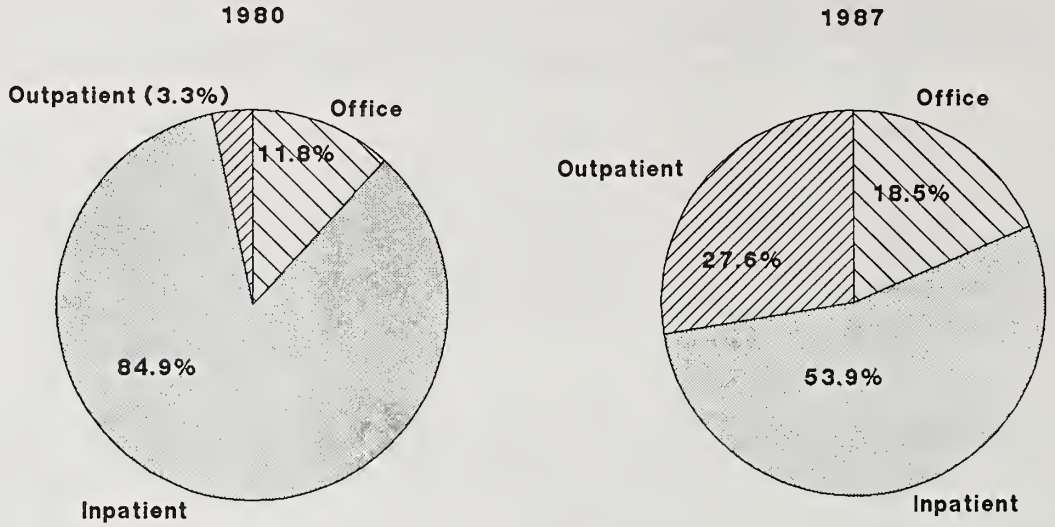
[a] Services are gross counts of approved billed services.

Between 1980 and 1985, approved charges for office-based surgery increased by nearly 12 percent a year and for medicine by 5 percent per year. On the other hand both inpatient surgical and inpatient medical service volume peaked in 1983 and declined thereafter. While inpatient surgery declined after 1983, total Medicare surgical services increased. This is consistent with national trends, which show that national hospital admissions fell while the number of surgical procedures performed remained stable (NCHS, 1986a, NCHS, 1986b, and American Hospital Association, 1986). In both Medicare and national data, surgery volume did not fall, but both shifted to outpatient locations and experienced additional growth in the outpatient setting (figure 2-5).

Diagnostic services and supplies and equipment have experienced very rapid growth in recent years.[10] Together these categories constituted 31 percent of SMI approved charges in 1987, up from 20 percent in 1975 (figure 2-6).

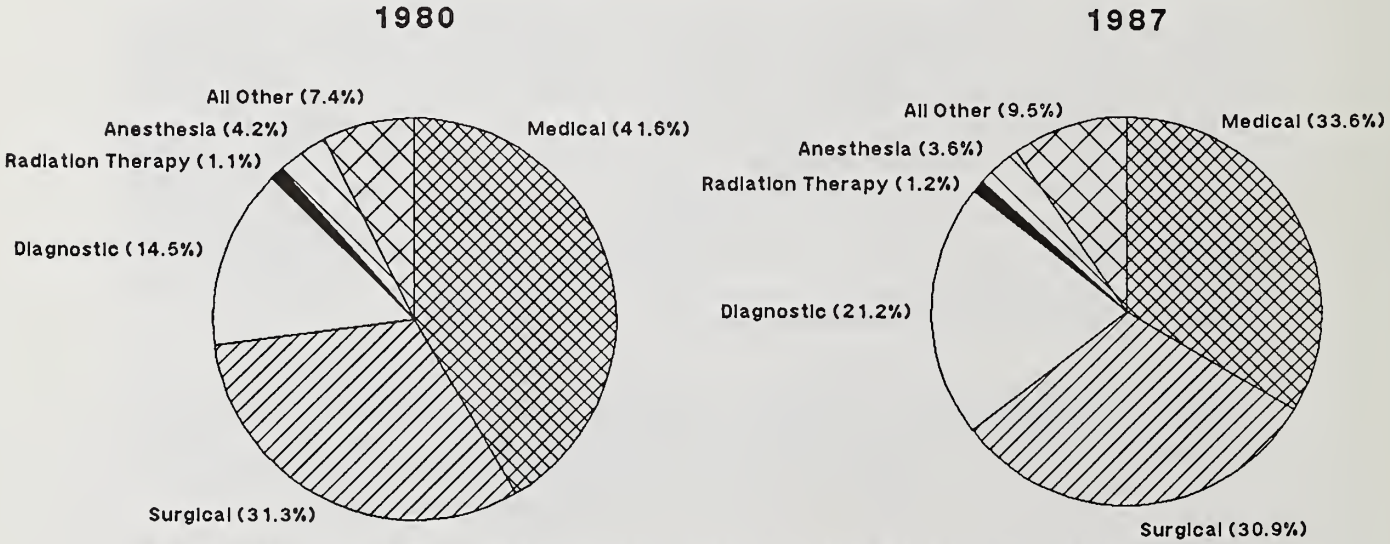
[10] This has resulted in a relative decline in medical and surgical approved charges from 75 percent of total approved charges in 1975 to about 65 percent in 1987.

Figure 2-5. Distribution of Surgical Allowed Charges, by Location, 1980 and 1987.



Source: Health Care Financing Administration, Medicare Part B Bill Summary Data.

Figure 2-6. Distribution of Part B Allowed Charges by Type of Service, 1980 and 1987[a]



Source: Health Care Financing Administration, Medicare Part B Bill Summary Data.

[a] The category "All Other" is primarily composed of equipment, supplies, ambulance service, and durable medical equipment.

Factors Affecting Trends

Recent changes in Medicare may have significantly affected trends in service use. Unfortunately, the simultaneous implementation of multiple policy changes makes the independent interpretation of any one of them difficult. Some of the more recent changes include the fee freeze, implementation of maximum allowable actual charges (MAACs) on nonassigned claims and the establishment of the Participating Physician (PAR) program, implementation of the Prospective Payment System (PPS) for paying hospitals, the introduction of a clinical laboratory fee schedule, and direct billing and mandatory assignment for some diagnostic services. In total these changes produced a temporary slowdown in the pace of expenditure growth. Between 1983 and 1984, Part B expenditures grew by only 8.3 percent (U.S. House of Representative, Committee on Ways and Means, 1987). However, the following year expenditures resumed their customary pace and rose by more than 16 percent.

The fee freeze, in effect from July 1, 1984, to May 1, 1986, for participating physicians and until January 1, 1987, for nonparticipating physicians, and implementation of MAACs, probably helped slow price increases for physician services, but the effect may have been offset in part by volume increases, the causes of which are difficult to determine.

The PAR program may also have had effects on physician and patient incentives. In 1983, immediately before the program began, 55.8 percent of claims were billed on an assigned basis. This increased to 68.5 percent by 1985, the first full year of the program, and preliminary estimates indicated a subsequent increase to 73.4 percent in 1987 (HCFA, Claims Workloads, 1986). Increased assignment reduces beneficiary out-of-pocket costs and therefore might have increased the use of services. It also might have resulted in fewer claims being misplaced or forgotten and never submitted since physicians, rather than beneficiaries, billed Medicare directly.

The fee freeze and the PAR program both closely followed the implementation of the Prospective Payment System. Some have suggested that PPS should have contributed to a reduction in Part B outlays because it reduced average hospital lengths of stay and hence opportunities to provide physician services (Roper, 1987). It has also been suggested that, at least initially, PPS induced a more cautious attitude among physicians, leading to lower use of services until they became familiar with its rules and incentives. But by encouraging physicians to provide more services on an outpatient basis, PPS may have shifted settings for services, particularly diagnostic testing. Hospital outpatient revenues increased by 16.1 percent a year between 1983 and 1986, compared with 5.9 percent for inpatient revenues (ProPAC, 1987), and physician services have also shifted from inpatient to outpatient settings (Fisher, 1987).

In the Deficit Reduction Act of 1984 Congress mandated that clinical laboratory tests under the SMI program be reimbursed on the basis of areawide fee schedules.[11] Reimbursement levels for tests done in a physician's office were set at 60 percent of prevailing charge levels for an area, and physicians were prohibited from charging for tests performed by an outside laboratory except for a small specimen collection fee. The elimination of markups and the continuing refinement of diagnostic technology have provided the incentive and

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[11] Clinical laboratory reimbursement is more fully discussed in chapter 11 and in a GAO report, *Laboratory Fee Schedules Produced Large Beneficiary Savings but No Program Savings*, GAO/HRD-88-32 (December 1987).

the opportunity for physicians to provide more office laboratory test services. Moreover, the fee freeze may have added a further incentive for office lab tests, since test revenues have historically been used to subsidize office visits.

Another factor that may confuse the analysis of utilization trends is the fluctuation in the speed of carrier processing between 1985 and 1987, which was partly the result of a deliberate policy to increase the time between billing and payment. The result was that in both fiscal year 1985 and fiscal year 1986 fewer claims were processed than received, while in fiscal year 1987 more claims were processed than received, somewhat reducing previous years' backlogs and artificially inflating 1987 outlays. However, preliminary analysis indicates that this effect is relatively small (Gramlich, 1987).

Additional analysis is needed to understand recent expenditure increases and to shape policy to deal with them. Analysts have been handicapped by the difficulty in obtaining timely, accurate data on Part B utilization and expenditures.[12] The Department of Health and Human Services has commissioned two large studies to determine the effects of these policy changes as well as other factors, such as the introduction of new technologies, on the Part B program. These studies cover 16 states' experiences beginning in 1983 and should increase our knowledge considerably when they are completed.[13]

BENEFICIARIES

Medicare is a major factor in providing financial security to the elderly. Its ability to maintain that financial protection has been challenged by continuing rises in health care expenditures and will come under increasing pressure with the aging of the U.S. population. Moreover, even with Medicare, the burden of health care costs falls unevenly. The less well off (disproportionately women and minorities), the very sick, and the heavy users of noncovered services are at greatest risk. As a means to better understand the challenges to the Medicare program in meeting beneficiary needs and the differential effects of current policies on beneficiary financial liability, this section begins by looking at the aging of the population and the economic status and health services use of the elderly. It then draws out the implications of rising health expenditures and Medicare coverage and cost-sharing policies for beneficiary out-of-pocket costs and the use of supplementary insurance coverage.

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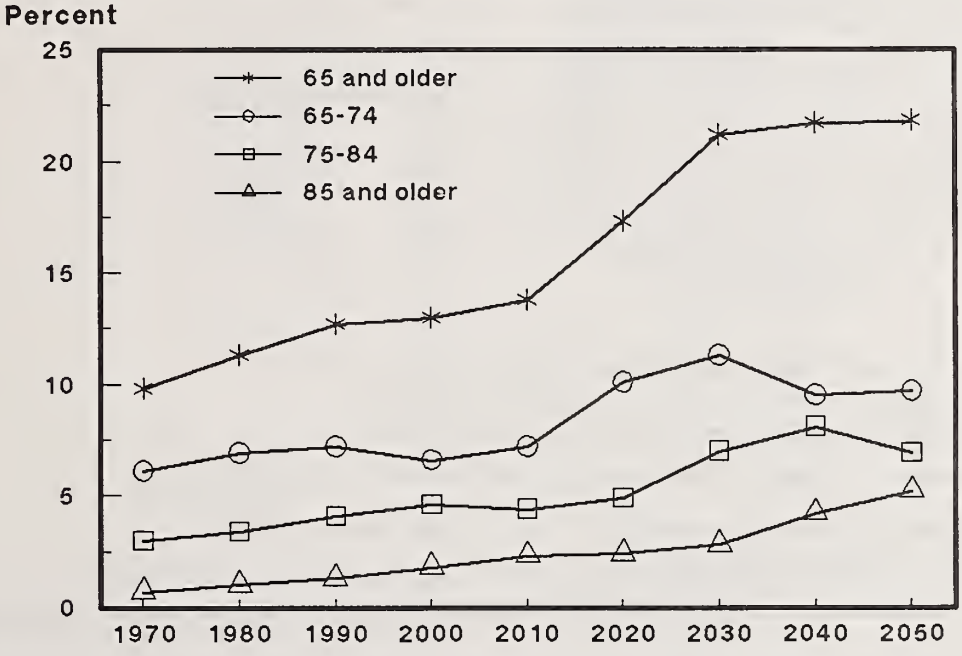
[12] HCFA has developed the Part B Medicare Annual Data (BMAD) system to provide better Part B data, but this series is of limited use for years before 1985. There are no detailed and reliable national time series data on the Part B program. Chapter 16 discusses Medicare data issues in greater detail.

[13] One study on six states is sponsored by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) and is being conducted by The Circle, Inc. (by McMenamin, et al.). Preliminary results are expected sometime in 1988. A second study of ten states is sponsored by HCFA and is being conducted by the Center for Health Economics Research (by Mitchell, et al.). Results of analyses 1983-86 are also expected this year.

The Aging of the Population

Those age 65 and older currently account for about 12 percent of the population. That figure will grow to 13 percent by 2000 and then increase rapidly to 22 percent by 2050, when Medicare will have more than 65 million beneficiaries (figure 2-7). Further, the aged group is itself aging. The percentage of the elderly who are age 75 or older is projected to increase from 39 percent in 1980 to 50 percent by 2000, with the fastest growth occurring among those age 85 and older (U.S. Senate Special Committee on Aging, 1987-88).

Figure 2-7. Elderly People as a Proportion of Total Population, 1970 projected to 2050



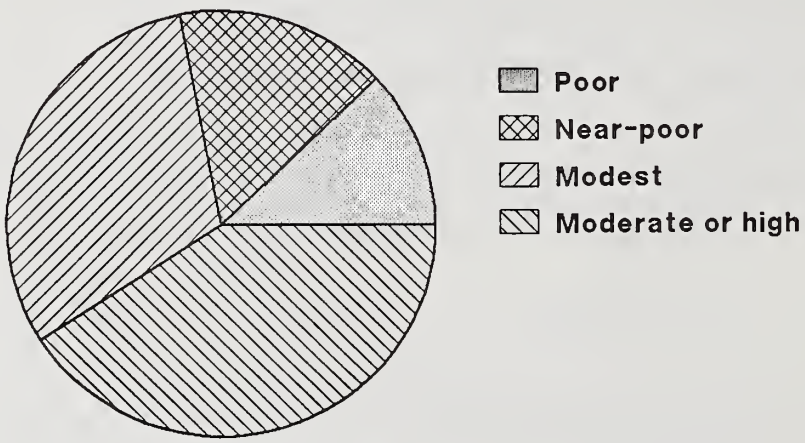
Source: U.S. Special Committee on Aging, American Assocation of Retired Persons, Federal Council on Aging, and U.S. Administration on Aging.

Economic Status of the Elderly

Through increases in Social Security benefits, Medicare, and private retirement insurance benefits, the economic condition of the elderly has improved substantially in recent years (Gordon, 1986). The poverty rate for the elderly has declined from more than 29 percent in 1967 to 12 percent in 1987 (U.S. Senate Special Committee on Aging, 1987-88). Nevertheless, 7.4 million of the nation's elderly lived in or near poverty (between 100 and 149 percent of the poverty level) in 1987. Twelve percent of the elderly had income levels below the federal poverty level. Another 16 percent lived on incomes between 100 and 149 percent of the poverty level, compared with 8 percent of the

nonelderly (figure 2-8).[14] As many as a third of the near-poor elderly would be considered impoverished if their out-of-pocket medical expenses were deducted from their available income (The Commonwealth Fund Commission on Elderly People Living Alone, November 1987).

Figure 2-8. Income Distribution of the Elderly, 1987



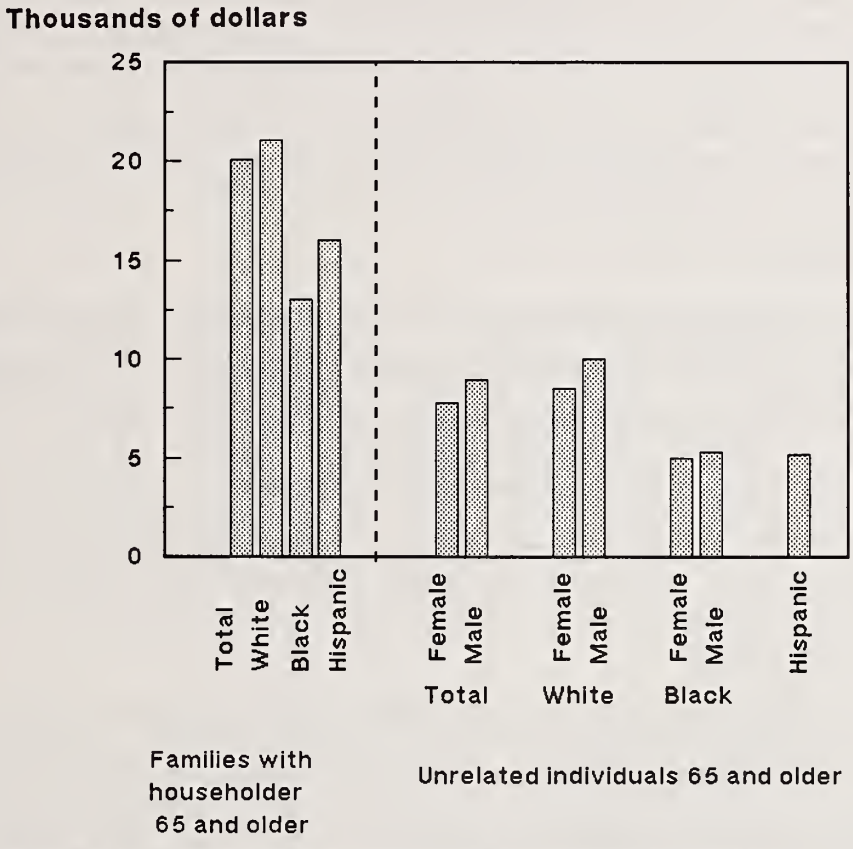
Poor = Less than 100% of the poverty level
Near-poor = 100%-149% of the poverty level
Modest = 150%-299% of the poverty level
Moderate or High = 300% of the poverty level or higher

Source: The Commonwealth Fund Commission on Elderly People Living Alone.

Particular segments of the elderly population suffer disproportionately from poverty. In 1986 persons age 85 or older were nearly twice as likely to be poor as those between the ages of 65 and 74. The economic well-being of the elderly varies considerably by race and sex, with women and minorities being particularly vulnerable (figure 2-9).

[14] In 1987 the federal poverty level was $5,447 for a single elderly person and $6,872 for a couple.

Figure 2-9. Median Annual Income of Families and Unrelated Individuals, by Race, Hispanic Origin, and Sex, 1986



Source: U.S. Senate Special Committee on Aging, American Association of Retired Persons, Federal Council on Aging, and U.S. Administration on Aging.

Utilization of Services

Older persons tend to use more health care services.[15] They are hospitalized about twice as often and stay 50 percent longer than the general population. The elderly represented only 12 percent of the population in 1983, but they accounted for 28 percent of hospital discharges. While the discharge rate for them declined between 1983 and 1985, it was still 66 percent higher in 1985 than in 1965 (Soldo and Manton, 1985).

[15] The discussion in this paragraph is based on data from the Health Interview Survey (National Center for Health Statistics, 1985), including unpublished data, and the National Hospital Discharge Survey (National Center for Health Statistics, 1985).

Elderly persons make up the majority of patients receiving certain procedures. Eighty percent of pacemaker and lens insertion/extraction procedures and about 75 percent of prostatectomies and hip replacements were performed on elderly patients. The elderly also have higher rates of chronic illness and use more physician visits, prescription drugs, and medical equipment and supplies than the rest of the population.

Poor elderly are twice as likely to report their health status as fair or poor than the elderly with moderate or high incomes. They experience more chronic illness and greater functional impairment than other elderly (The Commonwealth Fund Commission on Elderly People Living Alone, November 1987). A key factor explaining the higher use of services by low income beneficiaries who have both Medicare and Medicaid coverage is that they are typically in poorer health (Christensen, Long, and Rodgers, 1987).

Out-of-Pocket Expenses

Beneficiaries' out-of-pocket financial liability for acute care services comes from expenditures for Part B and private supplemental insurance premiums, coinsurance and deductibles for Parts A and B, billed amounts that exceed Medicare approved charges, and charges for uncovered services. It also depends on their use of services. Costs for individual beneficiaries can vary substantially, depending on their supplemental coverage, whether they have been hospitalized, their use of uncovered services, and the extent to which they receive services from physicians who accept assignment (that is, accept Medicare's allowed charge as payment in full).[16] Average out-of-pocket costs for beneficiaries were about $1,000 in 1986.[17] For certain beneficiaries, their costs were many times higher.

Expenditures for acute care services for the elderly are substantial and tend to be concentrated on those beneficiaries who have been hospitalized. In 1987 the average total costs for these services per Medicare beneficiary were estimated at $3,351. The per capita costs varied substantially from $12,213 for the 22 percent of beneficiaries who were hospitalized to $817 for those with no hospital stays (Christensen, Long, and Rodgers, 1987).

Expenditures for physician services are concentrated on a small proportion of Medicare beneficiaries. In 1983 the 6 percent of beneficiaries who reached $2,500 or more in approved physician charges accounted for 45 percent of all approved charges; the 15 percent of those with approved charges totaling $1,000 or more produced 73 percent of all approved charges. In contrast, the 66 percent of beneficiaries with approved charges of less than $250 accounted for only 7 percent of expenditures (Burney and Schieber, 1985).

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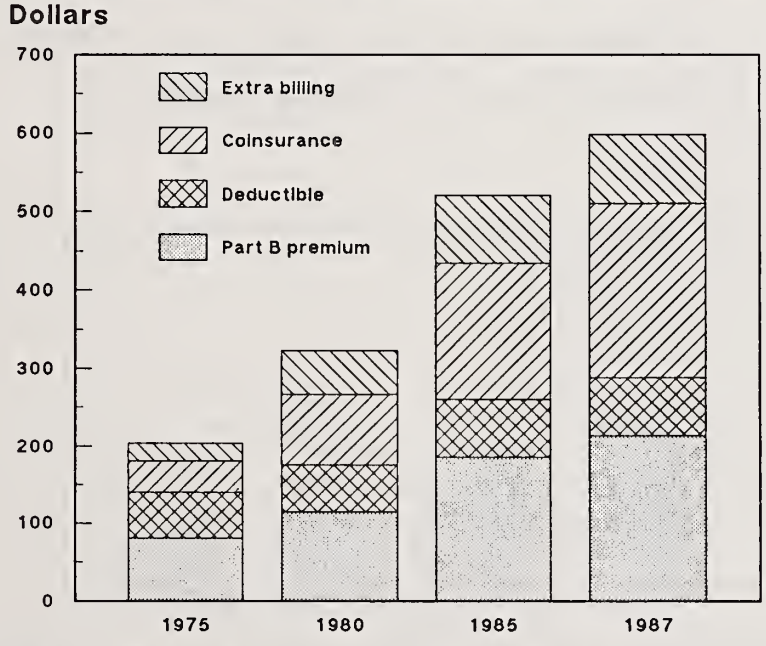
[16] Issues related to assignment and beneficiary liability for extra billing are discussed in detail in chapter 9.

[17] This figure does not include the costs borne by beneficiaries for long-term care.

While Medicare pays about three-quarters of hospital costs and slightly over half of physician costs,[18] beneficiaries are responsible for much of the remainder either through payment of private insurance premiums or direct out-of-pocket expenses. Spending for health care services poses a significant financial burden on the elderly. Older persons spend about 15 percent of their income on direct medical expenses and insurance premiums, roughly the same proportion as they did when Medicare was enacted (Congressional Budget Office, 1986).[19] The burden from medical care costs falls most heavily on those with very large medical bills, and those with little or no supplementary coverage. The poor and the near poor not covered by Medicaid are particularly hard hit.

Beneficiaries spent an average of $600 for covered Part B services in 1987, up from $204 in 1975 (figure 2-10). Excluding those who have Medicaid coverage, beneficiaries who generate no Medicare reimbursements have a potential out-of-pocket liability of at least $298 for the Part B premium (and possibly additional expenses related to the $75 deductible and extra billing on any services received

Figure 2-10. Average Annual Estimated Out-of-Pocket Costs per Aged Enrollee for Covered Part B Services, Selected Years, 1975-87



Source: Office of the Actuary and Division of National Cost Estimates, Health Care Financing Administration.

[18] The amount for physician costs includes premium revenues from beneficiaries.

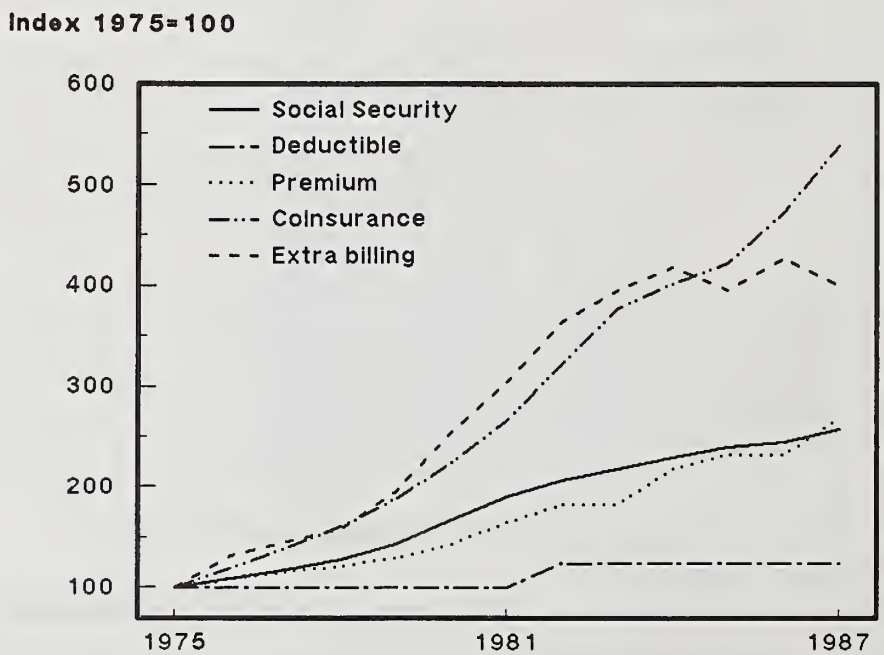
[19] This should not be interpreted to understate the important contribution Medicare has made to assuring access to and protecting beneficiaries from the high costs of medical care.

below the deductible amount). Beneficiary Part B financial liability has grown faster than Social Security benefits since 1975. Coinsurance and extra billing have been the fastest-growing components of beneficiary financial liability (figure 2-11).

Even with the coverage Medicare provides, beneficiaries face the risk of substantial out-of-pocket costs if they are hospitalized or require extensive medical services. For some beneficiaries, even meeting the cost-sharing requirements under Medicare can be burdensome. For these reasons, the majority of elderly people now have supplementary insurance coverage, either purchased by them or available to them through their eligibility for Medicaid. In 1986, 20 percent of the elderly had no supplementary protection for the expenses not covered by Medicare. Seventy-one percent purchased private supplemental insurance, commonly referred to as Medigap, and 9 percent had Medicaid to pay their Part B premiums and cost-sharing.

Medicare beneficiaries paid an average premium of $500 a year for Medigap coverage. These policies generally cover part or all of the Medicare deductible and coinsurance, plus hospital expenses beyond Medicare limits. About 20 to 30 percent of these policies cover some of the costs of physicians' bills in excess

Figure 2-11. Social Security Benefits and Components of Medicare Part B Liability, 1975-87



Sources: Social Security Administration and HCFA Office of the Actuary.

of Medicare approved charges, but protection for such uncovered services as prescription drugs and long-term care is unusual. Beneficiaries with Medigap pay on average about 18 percent more out of pocket than those with only Medicare. Their potential financial liability from illness, however, is greatly reduced. Beneficiaries without Medigap coverage who have more than 60 days of hospital care can face average costs of over $8,000, as opposed to about $1,600 for those with Medigap (Christensen, Long, and Rodgers, 1987).

Medicaid picks up required beneficiary cost sharing and certain additional services. In most states Medicaid also covers outpatient prescription drugs, a major expense for elderly persons. Balance billing is not permitted for Medicare beneficiaries who also have Medicaid.

The burden of medical expenses falls heavily on those elderly most in need of financial protection. Being poor does not necessarily mean that an elderly person will be eligible for Medicaid coverage. Medicaid provides supplementary coverage for only 29 percent of the poor and 8 percent of the near-poor elderly. These groups have the highest proportions of elderly who rely on Medicare coverage alone. Despite an average annual cost of $500, nearly 42 percent of the poor elderly and almost two-thirds of the near-poor elderly purchase private supplementary insurance, committing as much as 10 percent of their limited incomes for this protection (The Commonwealth Fund Commission on Elderly People Living Alone, November 1987).

The House and Senate have passed catastrophic insurance bills which would introduce coverage of outpatient prescription drugs and expand coverage for acute illness. Medicare currently pays for a few outpatient drugs, covering just 3 percent of beneficiary outpatient drug costs. The proposed measures would cover 80 percent of the costs after payment of a deductible. Medicare currently covers up to 90 days of inpatient hospital care per spell of illness, plus up to 60 lifetime reserve days. The proposed legislation would drop the spell of illness concept, covering an unlimited number of days and eliminating coinsurance for days 61-90 and lifetime reserve days. The bills also would expand coverage of short-term nursing home, hospice, and home health services.

Both versions of the bill introduce an annual cap for out-of-pocket spending on covered Part B services, and finance the catastrophic measure by increasing the monthly Part B premium and imposing an income-based supplemental premium, administered through the Federal income tax system. There are two major differences between the House and Senate versions: first, the timetable for initiating coverage of outpatient prescription drugs, with the House version introducing coverage for all drugs in 1989, and the Senate version phasing in coverage until 1993; and second, the mechanism for limiting the growth of out-of-pocket spending, with the House bill linking the growth of the cap to the annual Social Security cost-of-living adjustment, but the Senate bill increasing the cap by the percentage necessary to ensure that the same percentage of enrollees reach the limit in each year as do so in 1989 (Sullivan and Lundy, 1987 and Fackelmann, 1987).

While Medicare has protected many elderly people from potentially devastating costs of physician and hospital care, the elderly continue to assume a substantial portion of their health care costs out of pocket. Those at greatest risk, women and minorities, the poor, the sick, and the very old, often bear the greatest financial burden.

PHYSICIANS

The relationship between Medicare and physicians is a dynamic one. Medicare has become increasingly significant to physicians who treat Medicare patients, accounting for about 24 percent of their gross income. Physician's decisions about the care of their patients affect the use of services throughout the health system. How physicians practice medicine is influenced by many factors, including the number and distribution of physicians and the arrangements under which they practice. The context in which physicians practice has been changing rapidly in recent years, in part because of the substantial increases in the supply of physicians and the growth in alternative practice arrangements. This section describes the expansion in the numbers of physicians and discusses the effects of an increasingly competitive practice environment on how physicians practice, the costs and quality of the medical services they provide, and physician incomes.

Physician Supply and Distribution

There are about a half million physicians practicing in the United States, about one-fifth of whom are foreign medical graduates. From 1970 to 1980, the number of physicians grew from 334,000 to 468,000, increasing the ratio of physicians to population from 156 to 197 per 100,000. The supply is projected to reach 697,000 in the year 2000, with a ratio of 260 per 100,000 (Bureau of Health Professions, 1986). Some have warned that the nation faces an expensive oversupply of physicians. The final report published by the Graduate Medical Education National Advisory Committee (GMENAC) in 1980 forecast a surplus of 70,000 by the year 2000. Because of the difficulty in projecting need and supply in a system that is changing rapidly, the adequacy of physician supply continues to be a subject of debate.

The chairman of GMENAC now thinks that the projected surplus could have been considerably underestimated because of the increasing presence of Health Maintenance Organization (HMOs).[20] To the extent that enrollment in HMOs continues to rise, the ability of the health care system to absorb the growing numbers of physicians is significantly reduced. For example, with an assumption of HMO employment of 120 physicians per 100,000 population, and the prediction that 120 million Americans (44 percent) will be enrolled in prepaid health care by 2000, only 132,000 HMO or Independent Practice Association (IPA) physicians would be needed to care for this group. Based on the GMENAC estimates there will be 500,000 physicians left to care for 150 million people (Haglund, 1986). The results could be a decline in demand for physician services, fewer hours of work per physician per week, and possible unemployment.

Other practitioners can also provide medical services to beneficiaries, and their practice opportunities can also be affected by physicians' responses to increasing competition in the labor market. This is particularly important because most are limited by Medicare to providing care under the supervision of physicians and are paid indirectly through their employers.

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[20] The view of Dr. Alvin Tarlov was reported in an article in *Medical Tribune*, July 23, 1986.

The growing supply of physicians has created a greater sense of competition among practitioners. As this pressure intensifies it will affect what specialties physicians choose, how they practice, and where they practice. In theory, the growing number of physicians should help ameliorate the shortages experienced by certain areas of the country--albeit at a high cost. Some analyses indicate that this growth has supported a geographic diffusion of physicians since 1970, particularly of specialists and subspecialists, into small cities and nonmetropolitan areas (Newhouse et al., 1982; Schwartz et al., 1988). For the most part, studies found that the higher the number of physicians in a given subspecialty, the more widely distributed were its practitioners (Schwartz et al., 1988). The picture with respect to primary care practitioners is more complex, given the declining numbers of general practitioners and potentially different location preferences of specialists who practice primary care.

Cost and Quality

Expenditures for medical services and the quality of care are affected by the response of physicians to their growing numbers and to the changing context in which they practice. The elasticity of expenditures for physician services has been estimated at 0.4; that is, every 10 percent increase in the number of physicians produces a 4 percent increase in expenditures on physician services (Sloan and Schwartz, 1983).

Rapid increases in physicians' malpractice insurance premiums have been responsible for a portion of higher expenditures for physician services recently. Malpractice premiums account for a substantial fraction of some physicians' practice expenses. In 1986 the premiums were about 5 percent of gross revenues for physicians as a group but were more than 10 percent for several surgical specialties. Further, malpractice premiums are an increasing fraction of practice costs and gross revenues. Physicians on average spent one-sixth of the increases in their gross revenues on higher premiums from 1982 to 1986 (Gonzalez, 1987). The threat of malpractice liability also influences the way physicians practice, motivating them to order more tests or to provide services of limited benefit in an attempt to reduce their potential liability.

As the supply of physicians has grown, they have responded in various ways. They have extended their office hours, begun advertising their services, and have been more receptive to opportunities in alternative delivery systems of care (Emmons, 1987). Increasingly, physicians are practicing as members of some sort of organized group. The number of medical groups grew by 44 percent between 1980 and 1985; by 1984 about one-third of nonfederal physicians were affiliated with a group practice. The same year about 28,000 physicians were practicing in groups that provided as least some services on a prepaid basis (Havlicek, 1985). Physicians also have been entering for-profit business arrangements, owning or practicing in for-profit medical and surgical facilities. Questions of quality have and may continue to arise as the line between business decisions and professional medical decisions becomes increasingly blurred (Council on Long-range Planning and Development, 1986).

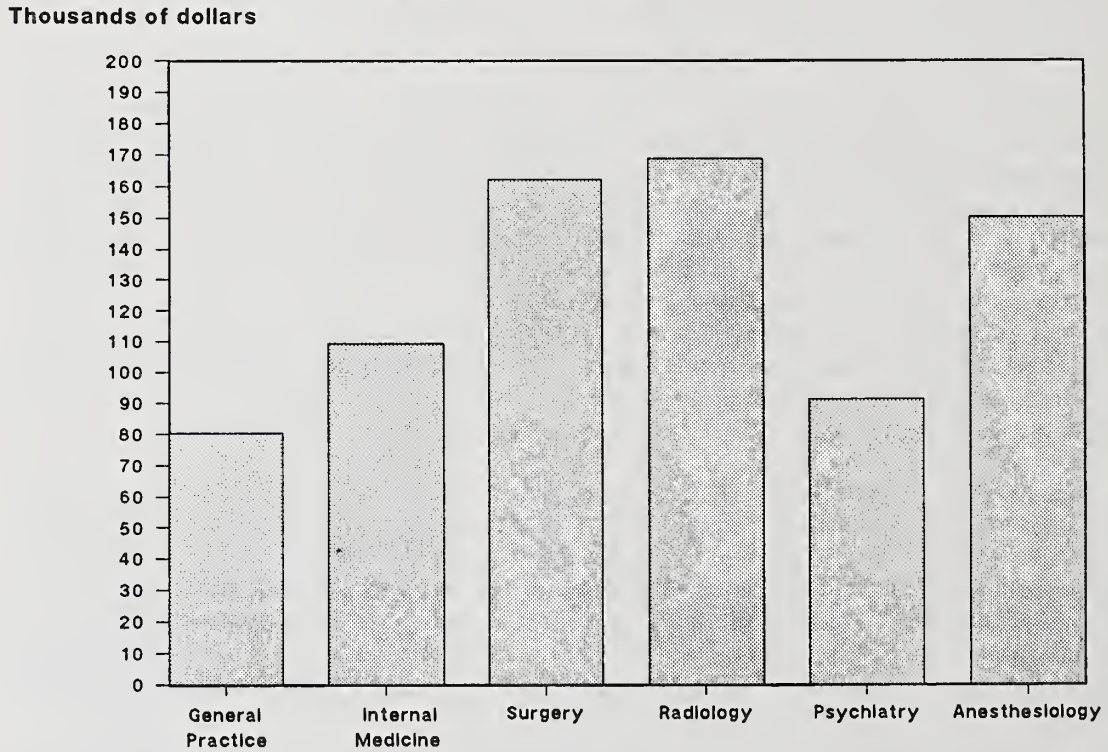
Physicians' Incomes

Leaders of organized medicine contend that the increasing supply of physicians is having a detrimental impact on their incomes (Freudenheim, 1986), but the

evidence does not support this. In 1986 net incomes averaged $119,500, more than twice the 1975 level (Gonzalez, 1987). After adjustment for inflation, physicians' average net income rose by 6 percent between 1975 and 1986, while average income for all full-time, year-round U.S. employees was virtually static. As a result, physicians' average income increased from 4.4 times that of an average employee in 1975 to 4.6 times that of an average employee in 1986. Because physician practice costs include pension contributions, physicians' total income, including that deferred through pension plans, could be substantially higher.

Incomes among specialties differ and the differences have been growing over time. Surgeons, radiologists, and anesthesiologists had the highest average incomes; pediatricians, general and family practitioners, and psychiatrists had the lowest (figure 2-12). Surgeons' average income of $162,400 in 1987 was 36

Figure 2-12. Average Physician Before-Tax Net Income, by Specialty, 1986



Source: AMA Socioeconomic Monitoring System.

percent above the average compensation for all physicians. There has been a significant change in the distribution of real net income for some specialties. While the annual percent change in real net income increased between 1975 and 1986 for anesthesiology (2.6 percent), surgery (1.8 percent), and radiology (1.2

percent), real net income remained relatively stable for some specialties, such as psychiatry (0.2 percent) and decreased for others, such as general/family practice (-1.1 percent), pediatrics (-0.6 percent) and internal medicine (-0.4 percent) (Gonzalez, 1987).

Incomes also show considerable geographic differences. In 1987, net income varied by census division from an average of $107,100 in New England to $129,000 for the West South Central area. Mean income in nonmetropolitan areas was $107,700; it was $124,500 in metropolitan areas with populations smaller that 1 million, and $117,500 metropolitan areas with more than 1 million people (American Medical Association, 1987).

DEVELOPMENTS IN THE PRIVATE SECTOR

Like Medicare, individuals and private organizations have also confronted rapidly rising health care costs. The growing number of uninsured individuals, estimated at more than 37 million, reflects both broader structural changes in the American economy and the decreasing affordability of insurance against the ever higher costs of illness.

Most private insurance is employer-based and employers, too, have been frustrated by increases in health costs that have outstripped those for other goods and services, consumed an ever larger share of revenues, and threatened their competitiveness in international markets. Private payers also are facing a sharp upturn in health care costs after a period of some moderation in trends. In addition, they face an aging workforce, and a growing unfunded liability for retiree health benefits.

Individually and collectively, private organizations have undertaken a wide array of actions to contain benefit costs. They have self-insured to avoid state regulation and mandated benefits, underwriting charges, and cash flow requirements of insured benefit plans; increased premiums, deductibles, and other cost-sharing to transfer more of the expense of health benefits to employees and to reduce demand for more discretionary types of care; and invested in data collection and analysis at the organizational and the community level to identify problems and evaluate benefit plan changes. These organizations have also offered employees a choice among several health plan options to stimulate price competition and replaced traditional benefits plans with HMOs, Preferred Provider Organizations (PPOs), and other managed care arrangements.

Managed care plans use many strategies to contain costs. HMOs and, to a lesser degree, PPOs channel patients to a subset of health care providers who have accepted cost containment requirements. These requirements vary but may include lower payment levels, shared financial risk, and cooperation with utilization review. HMOs and PPOs also may screen providers and exclude from participation those with aberrant patterns of service use or charges. Health plans with free choice of provider have redesigned benefits to encourage shifts from higher to lower cost services, changed methods of paying providers, and instituted an array of utilization management programs (described in more detail in Chapter 12).

Cost-control strategies such as cost-sharing, employee choice, and managed care tend to be introduced with high expectations. Some degree of disillusionment often follows. Cost-sharing, for example, has produced one-time cost reductions but is not perceived as achieving long-term changes in the rate of increase. Employee choice programs are often unwieldy, expensive to administer, and complicated by biased payment methods. The proliferation of new and inexperienced HMOs, and employers' demands for data and for premiums geared to their cost experience, have shaken the HMO industry.

Many are concerned that the whole system of private insurance (including HMOs and self-insured plans) may be unravelling as the insurance market has shifted from a group to an employee choice base. This shift combined with the proliferation of health plans has severely undermined industry capacity to project benefit costs, set premiums or budgets, and generally manage risk. A general strategy for coping with these strains has yet to be accepted although the problems are receiving more attention (Enthoven and Kronick, 1988; Scheffler and Rossiter, 1985).

In general, single solutions are giving way to an array of programs to respond to different and changing aspects of the cost problem. Private payers are, however, increasingly concerned that underlying demographic, technological, and other trends will keep their health benefit costs increasing at a faster rate than other costs.

APPENDIX 2

HCFA TYPE OF SERVICE CODES AND DEFINITIONS

HCFA identifies major groups of services using a single alphanumerical type of service (TOS) code:

1. Medical care: all physician services not elsewhere classified, and office visits, home visits, and nursing home visits. Includes therapeutic as well as diagnostic procedures, psychiatric services, and physical medicine.

2. Surgery: includes those procedures recognized in the surgical section of the CPT and services pertaining to incision, repair, excision, destruction, introduction, fractures, manipulation, dislocations, amputations, and endoscopy.

3. Consultation: refers to the professional service requested by a physician whose opinion or advice has been requested by another physician or agency.

4. Diagnostic X-ray: X-ray and related services undertaken for diagnostic purposes.

5. Diagnostic laboratory: laboratory services, regardless of where performed, required in diagnosis of disease or injury. Also includes tests such as EEG, EKG, ultrasound.

6. Radiation therapy: therapeutic radiation services for the treatment of malignancies, angiomas, leukemia, and so forth.

7. Anesthesia: services for anesthesia, including appropriate pre- and postoperative visits, and transfusion of blood and/or fluid incident to surgery.

8. Assistance at surgery: surgical assistance rendered at the request of the primary surgeon.

9. Other medical services: durable medical equipment, prosthesis and appliances, supplies, ambulance service.

0. Blood: whole blood and packed red blood cells.

A. Used DME: purchase or rental of used durable medical equipment by a beneficiary.

M. Alternative payment method for maintenance dialysis.

Y. Second opinions.

Z. Third opinions.

PART I

PROGRESS REPORT ON THE DEVELOPMENT OF A FEE SCHEDULE

After it began work in November 1986, the Commission's first major action was to endorse a fee schedule for Medicare. This recommendation established a general direction for change but did not include specific proposals for legislation. To accomplish this developmental task, the Commission adopted a broad agenda of data collection, analysis, and consultation.

The chapters in this section describe the Commission's analytic strategies and findings, its further recommendations, and some questions about fee schedule features that remain to be examined in detail. As a backdrop for this discussion, it will be useful to recapitulate the rationale behind the endorsement of a fee schedule as a replacement for Medicare's existing payment method.

RATIONALE FOR FEE SCHEDULE RECOMMENDATION

Medicare currently determines payments for physician services through a method referred to as "customary, prevailing, and reasonable" (CPR). Under CPR, payment for each service is limited to the lowest of: 1) the physician's actual charge; 2) the physician's customary charge for that service (defined as the physician's median charge for the service during the preceding year); or 3) the prevailing fee for that service in the community, now set at the 75th percentile of customary charges of all physicians in that community. Since 1976, increases in the prevailing charge have been limited by the Medicare Economic Index.

Joining many other critics, the Commission concluded that CPR provided poor incentives for cost-effective delivery of services. Specifically, it agreed that

- CPR has been inflationary;
- it provides inappropriate incentives for physicians' choices about what services to provide, where to practice, and whether to specialize; and.
- it is inordinately complex and difficult to understand and manage.

The results for beneficiaries are higher out-of-pocket expenses, potential problems with access and quality of care, and confusion about how the program works. For taxpayers, costs for the program are far higher than anticipated in the 1960s. And among physicians, all have experienced the bureaucratic burdens of Medicare, and some have faced inequities in the levels of payment for different specialties, geographic areas, and types of services.

A fee schedule, though not a solution to all Medicare's problems, would be an improvement in several respects.

- Beneficiaries and taxpayers should benefit as Medicare leaves behind the last remnants of charge-driven payment and its inflationary effects.

- CPR's largely mechanical process of establishing payment differentials will be replaced by a more deliberative approach that can reflect access, quality of care, equity, and other program objectives.

- A fee schedule will be much simpler for beneficiaries and physicians to understand and use. For policymakers and program managers, the consequences of program decisions should be much easier to forecast and monitor.

A fee schedule does share some problems with CPR and other fee-for-service payment methods. In particular, it will still provide a stimulus for overuse of physician services. However, by correcting incentives for overuse created by payment levels significantly above resource costs, it should reduce inappropriate utilization to some degree. Nevertheless, for the foreseeable future, a fee schedule will need to be supplemented by volume controls such as utilization review.

Also, the simplicity of a fee schedule, though an improvement over CPR, should not be overstated. It will be no short reference document, since it must specify payments for thousands of different physician services. In fact, there will not be one fee schedule but many that vary payments based on factors such as geographic differences in costs of practice.

The Commission recognizes these problems and other challenges in developing a detailed proposal for reform of physician payment. It remains confident that a fee schedule is the best available option for Medicare and that its benefits will outweigh its limitations.

OVERVIEW OF FEE SCHEDULE CHAPTERS

Chapter 3 of this report discusses one of the most important steps in the development of the fee schedule: the setting of relative values for different services. It examines pros and cons of alternatives and then recommends the use of a resource-based relative value scale. It also discusses work to date on such a scale and the Commission's plans for further analysis and recommendations.

A fee schedule will require rationalization and simplification in the way codes for physicians' services are used when claims are processed and paid. The current scheme invites abuse and confusion, and its implementation by carriers involves more discretion and variability than a fee schedule can permit. Chapter 4 describes coding changes needed to implement a fee schedule. It emphasizes the need for standard definitions of the components of global services such as surgery. It also lays out the Commission's approach to this task, which relies on consensus among specialists in various medical fields. Chapter 5 devotes special attention to a particularly difficult issue, the definition and coding of visit services.

Under CPR, variations in fees have arisen from variations in charges submitted by physicians. Under a fee schedule, policymakers can vary fees to promote goals such as equity among physicians and improved access to care for beneficiaries. To provide the basis for such decisions, several tasks must be completed, including development of a cost-of-practice index, specification of geographic boundaries for fee localities, and identification of desired adjustment factors that are not adequately accommodated by a cost-of-practice index. Chapters 6 and 7 discuss these tasks and the general issues in determining

whether and how to reflect differences among specialties and geographic areas in a fee schedule. Chapter 8 presents an analysis of current geographic differences in payments to physicians. This analysis should help the Commission if it is asked by Congress to advise on short-term policies to reduce excessive differences.

A fee-for-service payment method can create problems if a physician's charge to a beneficiary exceeds the combination of the Medicare payment and any deductible and coinsurance payments required from the beneficiary. Medicare has tried to protect beneficiaries from problems with balance or extra billing through its assignment and physician participation policies. These programs encourage physicians to agree to take the Medicare allowed charge (the Medicare payment plus required beneficary cost sharing) as payment in full. Chapters 9 and 10 review what we know about the strengths and weaknesses of these policies and lays the foundation for the Commission's assessment of options for the proposed fee schedule.

The last chapter in this section discusses payments for diagnostic services with a substantial nonphysician component.

ISSUES FOR THE COMING YEAR

Several issues remain for the Commission's consideration in the coming year. One involves the conversion factor for transforming a relative value scale into a schedule of actual prices. Another concerns how the fee schedule will be updated. As the Commission considers these issues, it will be guided by the program objectives outlined in Chapter 1, in particular, those relating to the impact on beneficiaries and the impact on the federal budget. A significant analytic effort will be required to forecast the budget implications of various recommendations under different policy assumptions.

Setting the Conversion Factor

A conversion factor transforms a relative value scale into a fee schedule. A relative value scale with geographic multipliers and perhaps other adjustments determines relative payment among services and geographic locations that will be different from those in the current system. The conversion factor will set the actual fees in dollars per service.[1]

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[1] A relative value scale gives weights for each service; the weights represent the relative amount to be paid. For example, if the value of a hospital visit was 10 and a surgical procedure 100, then the fee for the surgical procedure would be ten times that for the visit. Adjustments may be made to some or all weights in the relative value scale for the location of the service or the specialty of the physician. For example, a geographic multiplier specifies differences in relative values (and fees) between geographic areas to account for differences in practice costs, with a value of 1.0 in the reference area. A geographic multiplier of 1.1 would increase relative values in that area by ten percent--the relative value for the hospital visit would be 11 in that area. A conversion factor gives the fee in dollars for the services units in the RVS; a conversion factor of $3 per unit means that the fee for a hospital visit in the area in the example would be $33. One can alternatively consider geographic multipliers and other adjustments to apply to the conversion factor rather than the relative value scale; it is largely a matter of convenience. In this report, we find it more convenient to consider them as adjustments to the relative value scale.

The level of the conversion factor determines total expenditures for services provided under the fee schedule for an expected volume of services. The implications of a conversion factor for the federal budget and for beneficiary Part B premiums will be the principal determinant of the initial conversion factor when the fee schedule is implemented. However, since the conversion factor will also determine the actual fees received by physicians for each service, it may affect beneficiary financial liabilities and access to physician services as well as physician incomes.

The conversion factor could be budget neutral--that is, it would be set so that the projected level of expenditures under the new fee schedule was equal to the amount that would have been spent under the old payment system. Alternatively, Congress could set budgeted first-year expenditures for physician services independently of past trends, and choose a conversion factor to achieve this projected amount. In this way, Congress could use the transition to the fee schedule to increase or decrease the rate of growth of physician expenditures.

Updating the Fee Schedule

Once implemented, the fee schedule must be updated to take into account technological change, the rate of growth of expenditures, changes in physicians' cost of practice, and other factors. Medicare will need one or more processes to set a conversion factor and to make several decisions about relative values and adjustments to the relative value scale such as geographic multipliers. The Commission is examining several alternative ways these decisions could be made.

Updates in the conversion factor will depend on constantly changing factors, particularly the growth in program expenditures. The decision to set the conversion factor could be made annually in association with the process to develop a federal budget.

Changes in relative values and adjustments to the RVS such as geographic multipliers depend on factors that change more slowly, such as technological improvements in practice. Though extensive changes in relative values would seldom be needed, incremental changes would be needed more frequently. Incremental changes in relative values and adjustments to the RVS could be made annually to respond in a timely way to the introduction of new services, changes in services, and to changes in more volatile elements of the costs of practice such as malpractice costs.[2] More extensive change might be required at less frequent intervals. For example, a comprehensive update of relative values might be undertaken every ten years following comprehensive study of the resources required for each service.

A single process could be used to make all the updating decisions, or different processes could be used for setting the conversion factor and for modifying the relative value scale. The Commission has begun to examine variants of four processes for these tasks:

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[2] For example, a relative value for a service would be changed if technological change led to a substantial increase or decrease in the cost of providing it.

- o a formula approach linking the conversion factor to an index such as the Medicare Economic Index, with another mechanism used to update the RVS;
- o using the existing regulatory rulemaking process of the Department of Health and Human Services (DHHS);
- o recommendations to the Secretary of DHHS or to Congress by an independent board or commission; and
- o negotiation between physicians and a representative of the federal government.

In the formula approach, the annual update in the conversion factor could be determined by the increase in an index like the Gross National Product (GNP) or the Medicare Economic Index (MEI). The MEI, an index of the increase in physicians' practice costs, could be used to directly increase the conversion factor. It is now used as the basis for annual updates in prevailing charges. The increase in the conversion factor could be set to achieve an expected increase in expenditures for physician services equal to the increase in GNP. This would require a projection of the increase in volume of services. It is unlikely that an approach based on formulas could be devised for the many different decisions required to update the relative value scale and the adjustments to it.

Greater flexibility could be achieved through standard regulatory processes. Legislation could link increases in the conversion factor to an index such as the MEI or the GNP, but allow or direct the Secretary of DHHS to consider other factors. Similarly, the rulemaking process could be used to make incremental adjustments to the RVS and to geographic multipliers in accord with a process set out in legislation.

An independent board or commission could develop a comprehensive series of recommendations to the Secretary of DHHS or to the Congress. A standing commission could hear testimony from all interested parties including beneficiaries, providers, taxpayers, and government officials. It could also gather or develop information needed to analyze alternative recommendations. The commission would then make recommendations to Congress or to the Secretary of DHHS. The Prospective Payment Assessment Commission now provides this kind of information for both annual updates in payments and modifications in specific DRG weights for the Prospective Payment System.

A process of negotiation between physicians and a representative of the government could be developed to update the fee schedule. Congress would reserve the right to nullify an agreement reached by the government negotiators. Under such an agreement, negotiations would probably focus on the conversion factor, with modifications to the RVS delegated to representatives of the medical profession or a joint body with representation from physicians and other interested parties, subject to approval by the government.

Each of these processes has attractive features. They vary in their simplicity and cost, the interests represented directly or indirectly in the process, the potential for stalemate or impasse, and their flexibility. For instance, linking the conversion factor mechanically to an index is simple and predictable, but

provides no flexibility to consider other factors. Negotiation brings together physicians and payers, but does not directly include beneficiaries; it also may fail to reach agreement. A commission can consider the views of all interested parties, but its recommendations need not be accepted by the final decisionmakers. The Commission has begun to examine each of these alternatives and others incorporating elements from several of the methods.

Each of these processes will require data and information about the performance of the system and change in underlying factors upon which the fee schedule is based. For any process to work well, information will be needed on changes in practice costs, rate of growth of expenditures, beneficiary out-of-pocket costs and access to services, and quality of care (see chapter 17). The Commission will explore ways to monitor the performance of the system and to generate the needed information to support evaluation of the system and update of the fee schedule.

CHAPTER 3 BASIS FOR THE RELATIVE VALUE SCALE

A key component of a fee schedule is the relative value scale (RVS), which determines the relationship in payments among services. In developing recommendations for an RVS, the Commission has two tasks. First, it must identify a conceptual basis, so that the RVS is logically consistent and alternative scales can be evaluated. The reader will see in chapters 4 through 7 how identification of a basis for an RVS is necessary for decisions on issues related to many other aspects of a fee schedule. Second, the Commission must turn to the practical task of developing the relative values, or assessing those developed by others.

This chapter reviews the major alternative bases for a relative value scale. It argues that historical charges and resource costs are the only realistic bases for it and that of the two, resource costs should have the primary role. This does not imply an endorsement of the future results of the Resource-Based Relative Value Scale project being conducted by William Hsiao and colleagues at Harvard University. The chapter indicates the need for modifying relative values based on resource costs to adjust for inadequate access for some services and perhaps for classes of services that tend to be underprovided. It concludes by outlining the steps that the Commission will take to evaluate the adequacy of the RVS developed by Hsiao.

RVS BASED ON CHARGES

A charge-based RVS would use the current pattern of physicians' charges, either billed or allowed, to determine relative values. The basis for using charges is that they reflect market prices for services. If charges for service A are twice those for service B, then arguably the market has established such a relative valuation. Indeed, Medicare's customary, prevailing, and reasonable (CPR) system of establishing payments is designed to reflect these valuations by the market.

The argument against such a basis is that the market for physicians' services may not function effectively for the full range of services, so that market prices may not be a useful guide to payment policies. First, health insurance, by paying large portions of most bills, more or less relieves consumers of the need to compare the value of alternative medical services with their price. Indeed, insurance has distorted some of the comparisons through uneven coverage. Historically, it has covered surgery more extensively than medical services. In some plans, surgery is the only physician service covered. The use of deductibles has contributed to this orientation because a higher proportion of small bills (mostly for primary care) are not reimbursed. A patient seeking primary care knows that in many instances the entire bill will have to be paid out-of-pocket, while a patient seeking surgery expects that insurance will pay most of the bill. As a result, patients tend to be more sensitive to the price of primary care than of surgery, and this affects relative prices. While Medicare's coverage of physicians' services is less uneven than that of many private plans, the charges that are the basis of its CPR payment system are affected by the overall pattern of insurance coverage.

A second reason for skepticism about market signals is the inability of many patients, especially elderly ones, to be the active comparison shoppers that the economic model of competition assumes. Patients often have no idea what prices will be charged by their own or other qualified physicians, what the quality will be, and what specialists they will need to see. In many instances care must be delivered on an emergency basis, or the patient may be too ill and worried to shop for care.

In addition, few patients see doctors knowing what services to purchase. Patients depend on physicians to prescribe services appropriate for diagnosis and treatment. In contrast to the consumer intent on purchasing an automobile and comparing compact and full-size cars and different brands, consumers of medical services come to a physician knowing only their symptoms. Often, there are no alternative courses of treatment: an infected appendix, for instance, must be removed by a physician trained in that procedure. Other cases are in grey areas, where physicians disagree on the best course of treatment. For these reasons, patients cannot be expected to exercise the type of market-driven comparisons of different physician services that would lead us to have confidence that relative charges reflect relative value to the consumer as well as relative costs to the producer.

The Commission has thus concluded that the current pattern of relative charges is likely to be distorted. Indeed, the desire to depart from current patterns of relative values is the principal reason for the Commission's commitment to develop a fee schedule for Medicare.[1]

Still, the Commission's unwillingness to adopt historical charges as the primary basis for an RVS does not mean that they are unimportant. Alternative methods of developing relative values may not be able to work out, within a reasonable time and budget, relative values for all 7,000 services that have codes and the adjustments of various modifiers to the codes. These alternative methods might thus concentrate more efficiently on the most important services, while charges are used to calculate the relative values among each of the important procedures and the less important ones that are related to it. Charges would also be employed during a transition from current payment to relative values based on other factors.

RVS BASED ON RESOURCE COSTS

While charges reflect distortions and inadequacies in the market for physicians' services, a resource-cost basis can be seen as an attempt to simulate a perfectly functioning market. In such a market, competition drives relative prices to reflect the relative costs of efficient producers. As a result, the pattern of prices sends signals to producers and consumers that promote an efficient allocation of resources. Many also accept the distributional consequences of perfect markets, so long as government income security and tax policies prevent economic hardship to individuals. Consequently, relative values for physicians' services that are based on resource costs would promote a more efficient allocation of medical care resources and be accepted as equitable by many.

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[1] For a more detailed discussion of the Commission's rationale for a fee schedule, see chapter 3 of its first annual report to Congress (Physician Payment Review Commission, 1987).

A resource-cost approach to relative values does not imply that all differences in costs should be reflected in fees. The economic model discussed above indicated that relative prices would reflect the costs of efficient producers. If a surgeon spends more time than other surgeons for a procedure, a resource-cost approach does not imply that he or she should be paid more than other surgeons. Similarly, if solo practitioners have higher costs than those practicing in groups, the resource-cost approach does not imply that their payments should be higher. Those developing relative values based on resource costs need to consider the costs of broad categories of physicians and to decide which variations in costs should be reflected in relative values and which should not.

The most significant challenge in turning the concept of an RVS based on resource costs into usable estimates is that more than half of the costs of care are not purchased by physicians. Instead, these costs are the physicians' time and effort. In contrast to such resources as office space and clerical assistance, the physician's efforts are not purchased in a well-functioning market. They are provided directly by the owner of the medical practice and thus have no market price to use to value them. Without market data, valuation of physicians' time and intensity of effort must be based on surveying physicians as to what goes into each service and the aggregation of these data into a single measure of resource costs.[2]

The Hsiao study has developed methods to elicit this information from physicians and combine it into a measure of resource costs. The researchers have specified various components of a physician's input, such as time, mental effort, physical effort, risk, and technical skill, and asked physicians to rate services in terms of both this set of attributes and a composite called total work. In briefing the Commission staff on his progress, Professor Hsiao has indicated that predictions of total work from regression models involving its components are highly correlated with physicians' estimates of total work. As a result, he is using physicians' estimates of total work as the indicator of the time and effort required for each service.

Hsiao's method is but one way of estimating resource costs. As described below, the Commission will evaluate the merits of this methodology and the usefulness of estimates of resource costs produced by it.

Research is not the only way of developing estimates of resource costs. Negotiation between payers and physicians over a fee schedule could also yield relative values based on resource costs. While negotiations of this type have been used successfully to develop a fee schedule by some private payers, such as Caterpillar, Inc., its feasibility for a public program the size of Medicare remains to be explored.

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[2] Some have suggested using compensation of physicians in staff model HMOs as a guide to market-based relative values. These organizations often purchase their physician inputs in the market. But the prices paid are determined in large part by the competition--earnings of self-employed physicians, which reflect the current pattern of charges. Thus using data from staff model HMOs would tend to introduce the current pattern of relative charges into an attempt to use a different basis to determine relative values.

RVS BASED ON VALUE TO THE PATIENT

Some have suggested value to the patient as a third possible basis for an RVS.[3] In the economic model discussed earlier, relative prices would reflect value to the patient of the last unit produced of the service, but it does not appear practical to use this concept as a primary basis for an RVS.

First, most patients are unlikely to know the value of a medical service to them. Indeed, physicians often have little information on the effectiveness of particular services, as confirmed by evidence of delivery of inappropriate services (defined as medical risks exceeding medical benefits) to patients.

Second, the value of a particular type of medical service is likely to vary dramatically from patient to patient or for a single patient from occasion to occasion. Thus the value of cataract surgery will vary according to the severity of the visual impairment, and the value of an office visit for a hypertensive patient will vary according to how elevated his blood pressure is and the elapsed time since his last visit. Indeed, establishing the value of medical services to individual patients is what medical decisionmaking is all about. With value so dependent on the medical condition of the patient and the frequency of service, one must be skeptical concerning how value can be used to develop an RVS, especially when the appropriate concept is the value of the marginal service rather than the average service.[4]

Third, eliciting reliable information from beneficiaries on how valuable one service is compared with another is likely to be more difficult than eliciting information from physicians on resource costs. The literature on decisionmaking under uncertainty is not encouraging about the prospects for eliciting reliable responses from individuals on preferences when small probabilities are involved. Since the economic model predicts that relative prices will reflect both relative costs to the producer and relative value at the margin to the consumer, one can simulate the prices of this model with either resource costs or value to the patient and should choose the one that is more practical.

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[3] See, for example, Hadley and Berensen (1987). Value to the patient was also mentioned by some specialty societies at the Commission's hearing in May 1987 to discuss its recommendations on meeting budget reduction targets for Medicare. See the statement by Stephen Obstbaum on behalf of the American Society of Cataract and Refractive Surgery.

[4] In a competitive marketplace, consumers often pay much less for a good or service than the value they attach to it. Under competition, consumers buy those goods that are worth more to them than the price. Thus while water is essential to life, consumers pay relatively little for it, since its price is determined by costs of production and its value to consumers in its most marginal uses, such as watering a lawn. Similarly, for a person with poor eyesight, eyeglasses are highly valuable but cost less than $100 because competition limits the price to the costs of production.

While practical problems appear to preclude using value to the patient as the primary basis for a relative value scale, considerations of the need to increase incentives to provide services that tend to be underused should be reflected in such a scale. For example, some feel that preventive services are underused. Relative values for those preventive services covered by Medicare could be increased to give physicians additional incentives to provide them.[5]

ADJUSTMENTS FOR BENEFICIARY ACCESS

By diverging from a charge basis, a fee schedule would face risks that, for particular services in particular geographic areas fees would not be high enough to provide adequate access to care. Under current policies concerning assignment (see chapter 9), inadequate access could result if a high proportion of qualified providers charged more than the Medicare allowed amount and did not accept assignment. If extra bills were limited, some qualified providers could refuse to serve Medicare patients.

The fee schedule could provide for upward adjustments in payments for individual services to avoid inadequate access (or downward adjustments where access was judged to be relatively ample). Whereas private purchasers of physician services that depart from usual charges, such as Health Maintenance Organizations (HMOs) and Preferred Provider Organizations (PPOs), use subjective judgments about how high fees have to be in particular markets to ensure a desired level of access, Medicare would probably be limited to an objective process. A process must therefore be developed to monitor access to care and make adjustments to increase and decrease payments as appropriate.

Unfortunately, the assignment rate does not appear to be a useful indicator. It has traditionally varied widely by geographic area and by specialty for reasons unrelated to the adequacy of Medicare payments relative to those of private payers. Since accepting assignment means not only a commitment by the physician not to charge more than the Medicare approved charge, but also to collect 80 percent of this charge directly from the Medicare carrier, assignment decisions depend not only on the adequacy of the payment level but also on the efficiency of the carrier, the likelihood that the patient will pay the physician, and the physician's attitude concerning direct payment by an agent of the government (see chapter 9).

Other measures might be more useful. These include changes in assignment rates over time, the size of extra bills, or even surveys of beneficiaries to detect problems of lack of access. This area clearly needs further investigation and is a priority for the Commission.

The need for adjustments to assure access will depend in large part on the response of private payers to a Medicare fee schedule. If these payers base

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[5] Preventive services, such as immunizations for communicable diseases, could be underprovided if individuals fail to take into account the value to others of their being unable to transmit the disease. But general social concern for the health of others could extend the argument for additional provision to preventive services not related to communicable diseases.

their reimbursements on a Medicare fee schedule, the number and magnitude of such adjustments would be much smaller.[6] Members of the Commission that have frequent contact with private insurers and large employers indicate that these payers are highly dissatisfied with their version of CPR payment and look favorably to the possibility of following Medicare to a fee schedule based on relative values that differ from those of the current system. Medicaid programs would also be likely to adopt a Medicare RVS. Some already use Medicare approved charges.

FROM CONCEPT TO NUMBERS

Having endorsed the concept of resource costs as the primary basis for a relative value scale, the Commission needs to identify an actual scale on which Medicare can base payment. A starting point in the Commission's deliberations will be the results of the Hsiao study. The Commission plans an extensive evaluation of these results and, if the evaluation proves generally acceptable, will consider refinements to the RVS. This evaluation will include comparison of the RVS with current patterns of charges and perhaps alternative relative value scales developed through consensus or negotiation.

The Hsiao Study

The Resource-Based Relative Value Study is to develop a relative value scale for services provided by physicians in seventeen specialties.[7] It is funded by a grant from the Health Care Financing Administration. The American Medical Association is a subcontractor that nominates physicians for the various technical panels in the study, supports the study with data on physicians from its various files, and provides technical assistance in a variety of areas. Completion is scheduled for July 1988.

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[6] Private payers would not have to pay the same amounts as Medicare. Most tend to have higher payments to physicians than Medicare does. Private payers could pay a certain percentage over the Medicare amounts, however.

[7] The specialties are anesthesiology, dermatology, family practice, general surgery, internal medicine, obstetrics and gynecology, ophthalmology, oral maxillofacial surgery, orthopedic surgery, otolaryngology, pathology, pediatrics, psychiatry, radiology, rheumatology, thoracic surgery, and urology. In the Omnibus Budget Reconciliation Act of 1987, Congress directed the Secretary of Health and Human Services (DHHS) to expand the scope of the study to cover cardiology, dermatology, emergency medicine, gastroenterology, hematology, infectious disease, nephrology, neurology, neurosurgery, nuclear medicine, oncology, physical medicine and rehabilitation, plastic surgery, pulmonary medicine, radiation therapy, and osteopathic procedures.

The core of the study is information obtained through surveys of physicians on the time, intensity, and total work required to perform each of approximately 300 services and procedures. These services and procedures represent 48 percent of Medicare claims. Specialty panels of physicians provide technical advice, such as the appropriateness of the questionnaire and the correctness of the interpretation of results. An interspecialty panel assists in identifying services that are the same or equivalent, so that the relative values created for each specialty can be linked across specialties.

Process for Evaluation

The Commission plans a thorough evaluation of the Harvard study that will include public hearings by a subcommittee of the Commission and analysis by its staff and expert consultants. Hearing the views of interested parties, especially physicians and beneficiaries, will be an important part of the evaluation process. Two hearings are planned. The first will take place shortly after the results of the study become available to the public and will provide an opportunity for interested parties to offer advice to the Commission on how to proceed with its evaluation. Groups will be able to point out those aspects of the study about which they are most concerned. After the hearing the Commission will meet to plan the additional work that its staff will conduct.

After the staff's work is complete and the Commission has reviewed it, a second hearing will be held to obtain views on the relative value scale to be recommended by the Commission. After this hearing the Commission will develop its final recommendations on the relative value scale.

The Commission's staff will conduct technical evaluations of the Hsiao RVS to assess the soundness of the overall approach, the degree to which the survey questionnaire elicited the data the study was seeking, the sampling and weighting techniques, the psychometric techniques used to compile the information from the responses, and the suitability of the method to link relative values across the different specialties. The staff will interview some of the physician panelists who participated in the study to gain their perspective on the role played by the panels and to understand better any shortcomings that participants recognized.

If limitations in the study are identified, the Commission will consider developing refinements. Limited resurveying of physicians or surveying an additional sample would be one possibility. A more detailed allocation of overhead costs to classes of services provided by a particular specialty would be another. Some use of consensus panels could also be considered to address possible limitations in the methodology. For example, if problems are perceived with some of the extrapolations from the services studied to the remainder of the procedure codes, consensus panels could refine the extrapolations.

An important part of the analysis will involve simulating the effects of the Harvard RVS on beneficiaries and physicians. A model will be constructed with the 1986 Medicare Part B Annual Data files[8] to simulate the changes from levels projected under current policies in payments to a variety of typical

[8] These files include claims data submitted in a uniform format from all carriers .

physicians and the changes in coinsurance and extra billing to different categories of beneficiaries. The model will incorporate assumptions about induced changes in the behavior of physicians and beneficiaries, such as changes in practices regarding extra billing and changes in the volume of various services.

Alternative Scales Based on Resource Costs

One aspect of evaluating the Hsiao study will be to compare its results with other relative value scales based on resource costs. For example, the Commission is aware of a Department of Health and Human Services (HHS) funded study by the Center for Health Economics Research that is nearing completion. This study also uses a resource-cost approach but uses a different survey instrument. In the Commission's work last year on overvalued procedures (appendix 1-A), it identified scales developed by consensus panels of physicians that used resource costs as a guiding principle. Additional scales may have been developed since then. Such comparisons will provide insight into differences between the Hsiao approach and methods emphasizing consensus development.

Other alternatives are likely to be available for portions of the RVS. For example, in the Omnibus Budget Reconciliation Act of 1987, DHHS was mandated to develop a relative value guide to be used beginning January 1, 1989, as the basis for payment for anesthesia services.[9] The Commission will want to compare the relative value guide developed by DHHS with the intraspecialty relative values for anesthesia services developed by the Hsiao study. Similarly, DHHS has been charged with developing a fee schedule for radiologists' services, and this can be compared with the intraspecialty values for radiology. However, if relative values for these specialties are to influence the overall RVS for Medicare, interspecialty linkages based on the Hsiao study or modifications to it would have to be employed.

CONCLUSION

- The Commission will use resource costs as the primary conceptual basis for relative values in a Medicare fee schedule. This does not imply an endorsement of particular estimates of resource costs being developed by William Hsiao and colleagues at Harvard University.

- Charges are nevertheless likely to play a role in the relative value scale.

- A systematic way needs to be developed to modify the relative value scale to respond to considerations of beneficiary access to care. The magnitude of the need for such adjustments will depend on the degree to which private payers base their payments on the relative values used by Medicare.

- The Commission plans a thorough evaluation of the relative values developed by Hsiao. The process will include two hearings and extensive analysis by its staff.

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[9] For many years a large number of carriers have paid for anesthesia services on the basis of the relative value guide developed by the American Society of Anesthesiologists.

APPENDIX 3

MINORITY STATEMENT

Chapter 3 of the Commission's report deals with the basis for a relative value scale. We feel that the Commission has gone much too far toward a conclusion supporting a resource-based relative value scale as the approach of choice in the development of a fee schedule for the Medicare program. There has not yet been a careful examination of the facts needed to draw such a conclusion.

The Commission endorsed a fee schedule based on a relative value scale, with appropriate multipliers--a position that we support. It has the responsibility to consider various methods for setting relative values, but the discussion in Chapter 3 lacks proper balance in reviewing the options open to policy-makers. In this chapter, the Commission endorses the concept of basing a relative value scale primarily on resource costs without consideration of any of the very real problems associated with this option. It seems largely to reject any major role for the marketplace for physicians' services in the determination of relative values. For example, we feel that a negotiated RVS, based generally on charges, is a viable alternative to an RVS based on resource costs and feel it should be given equal weight in the upcoming deliberations.

If resource inputs alone are used to set values, a service of little or no diagnostic or therapeutic benefit to most patients, that took a lot of time and other resource inputs to produce, could be assigned a higher value than may be justified. Thus, input costs cannot, and should not, comprise the sole basis for establishing payment values. This does not mean to imply that current physician charge levels alone will always provide an accurate measure of relative value. The charge-based system now in use has been developing for the past 100 years and, in general, reflects the value of services, with some exceptions. By the benchmark of charges, some physicians' services--such as those in rural areas--may be undervalued, while others may be too high, and thus charge-based relative values should also be examined with a critical eye.

In our view, the Commission has not had the benefit of the information needed at this time to fully endorse one methodology over another. This information is not yet available. The Congress has directed, and the Health Care Financing Administrative is conducting, a study of a resource-based approach to setting relative values. This work, under the direction of Professor William Hsiao, has not been studied in depth, and the results will not be reported until July 14, 1988. It is hard to see how the Commission can endorse a resource-cost approach without having the opportunity to carefully evaluate the results from the Hsiao study. Moreover, the Commission has not made adequate efforts to review what other policy tools will be needed to develop a workable fee schedule for the Medicare program. Resource costs can be used to help establish values, but not necessarily be the exclusive basis for a Medicare RVS.

A great deal more information is needed before we can accept the discussion in this chapter with so few reservations. Otherwise, false expectations may be raised in the minds of policymakers, patients and practitioners by implying that the Commission unanimously concurs with the conclusions contained in the chapter.

Commissioners:

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Richard Wright

CHAPTER 4 CODING FOR A FEE SCHEDULE

A coding system is a language that identifies and defines physician services. It is used by physicians to describe their services and request payment for them and by payers to represent physician services for reimbursement. Effective communication between physicians and payers depends on the uniform interpretation and use of this language.

Ambiguity in a coding system can complicate the development of a relative value scale and the use of a fee schedule. If services are not defined clearly, it is difficult to assign them accurate values. If providers and payers do not interpret codes similarly, fees may not be applied to the intended services. If codes do not represent distinguishable or verifiable services, they may not be used accurately or appropriately. Inaccurate use of codes can be associated with improper physician payment, and this can affect program expenditures, access to care and out-of-pocket costs to beneficiaries.

In the current system for coding physician services under Medicare, codes do not always represent the same services to the physicians and carriers who use them. This occurs because codes are not implemented consistently across carriers. Moreover, imprecise definitions of codes allow them to be applied inconsistently by providers.

The Commission is working to make the interpretation of codes more uniform under the fee schedule. In cases such as global surgical services, where this can be accomplished by standardizing carrier interpretation and implementation of current codes, the Commission will make specific recommendations for reform. In cases such as visit services, where uniform interpretation may require more specific definitions of codes, the Commission is investigating options for reform.

Codes that are defined clearly and implemented consistently may still be subject to inappropriate use if there are substantial differences in payment for services that are similar in actual value. For this reason, it is important that coding reform be integrated with reform in the relative values of services; the accurate assignment of relative values can remove incentives to use codes inappropriately.

BACKGROUND

Until 1983, carriers that administer Medicare Part B claims used a variety of coding systems for processing claims and reporting data to the Health Care Financing Administration (HCFA). Some carriers used variants of the Blue Shield Coding and Nomenclature Manual, some worked from the nomenclature of the 1974 California Relative Value Study (CRVS), and others used the American Medical Association's *Common Procedural Terminology* (CPT). This created substantial problems for program evaluation and data analysis since different carriers used different codes to represent the same or similar services.

In 1983 Medicare carriers were required to convert to the HCFA Common Procedure Coding System (HCPCS). This system uses CPT to describe physician services. CPT was first issued in 1966 and is now in its fourth major edition. A 12 member Editorial Panel that includes physician representatives from

various specialties as well as medical representatives of HCFA, the Health Insurance Association of America (HIAA), and the Blue Cross and Blue Shield Association (BCBS), meets four times a year to consider additions, deletions, and modifications to the code. The results of these decisions appear in an annual update of CPT.

The Current Medicare Coding System

Conversion to HCPCS has not produced a system for coding physician services that is implemented or understood uniformly. Although carriers are now required to use a common terminology, these codes do not always represent the same services to the physicians and carriers who use them. This occurs because carriers have considerable flexibility in interpreting and implementing HCPCS under the current payment system.[1] Moreover, CPT does not provide precise and specific definitions for all types of codes. Ambiguity allows inconsistency in the interpretation and application of codes among providers and carriers.

If codes are not defined clearly or implemented uniformly, they may be difficult to use for payment. For example, if codes are not interpreted in the same way by providers and carriers, allowed charges may not be applied to the intended services. If codes do not represent distinguishable or verifiable services, they may not be used accurately. If codes are misused, physicians may receive inappropriate payment. When physicians are overpaid by Medicare, beneficiaries are burdened with excessive copayments. When physicians are underpaid, beneficiaries may face increases in balance billing or decreased access to care.

CPT contains codes for several types of physician services: visit and consultation services, technical procedures and global services (clinically related services that are packaged for purposes of billing for payment).[2] Codes for each type of service have problems with ambiguity and inconsistent carrier implementation.

Codes are ambiguous if they do not represent well-defined services. This can occur for one of several reasons. First, there may be confusion as to whether a code represents a complete service or part of a service. For example, codes for procedures with distinct technical and professional components may represent any or all of the following physician services: maintaining equipment for a procedure, performing a procedure, or interpreting the results of a procedure. For some procedures (EKGs, for instance) this distinction is partially clarified by the use of separate codes for technical (performance) and professional (interpretation) components. However, when there is only one code for a procedure, the distinction is not clear.[3] This is important because physicians do not always provide all components of a service, and they cannot be paid appropriately if the code for that service does not specify what they

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[1] The authorizing regulation is 42 CFR 405.512.

[2] Global services are primarily surgical services.

[3] Although CPT contains modifiers to identify professional components of services, they are not always a solution to the problem. First, HCFA and carriers restrict the use of modifiers by physicians. Second, it is difficult to use a modifier correctly if the code to which it is applied is ambiguously defined.

do. If carriers use a code to represent a complete service and if physicians use the same code to bill for separate components of that service, the payment will not reflect the service provided.

Codes can also be ambiguous if they do not designate explicit services. Unlike technical procedure codes, CPT visit codes do not specify exactly what physicians do. As a result, individual visit codes can represent different services when used by different physicians or when applied to different patients. Ambiguity of this type tends to blur distinctions between codes. Related codes (for example, those for limited and intermediate office visits) may not be clearly and consistently distinguishable by providers or verifiable by carriers. If payments based on these codes differ substantially, physicians may be encouraged to bill under the code that generates the higher charge.

Finally, certain categories of codes are ambiguous because they do not consistently represent the same component services. This is a problem with carrier implementation of global service codes. Global services are primarily surgical. Surgeons have a long tradition of including pre- and postoperative care in the cost of an operation, and the allowed charges for surgery take this into consideration. The problem is that the extent and type of pre- and postoperative care to be included is not standardized. As a result, carriers and surgeons may have different interpretations of each code. This ambiguity can be associated with improper payment. Surgeons may be overpaid if they bill separately for services that should be billed as a single package, or submit separate bills for a global service and its component services. Surgeons may be underpaid if they use a global service code to cover complete services when the carrier's charge is meant to cover only the basic surgery. Inappropriate payment of both types can affect program expenditures, access to care, and out-of-pocket costs to beneficiaries.

Clearly, there are substantial problems with the current system for coding physician services under Medicare. But a more immediate consideration is the potential effect of these problems on the proposed fee schedule. If services are not defined clearly, it is difficult to assign them accurate values. Moreover, a change in the method of physician payment from the customary, prevailing, and reasonable (CPR) system to a fee schedule will not improve implementation of the payment system unless carrier interpretation is standardized and the services associated with codes are assigned appropriate payment.

The Need for Coding Reform

The Commission recognizes that coding reform is a prerequisite for the development of a relative value scale and the implementation of a fee schedule under Medicare. For global surgical services and services with technical and professional components, this can be accomplished by standardizing carrier interpretation and implementation of current codes. For visit services, this may require more specific definitions of codes.

One reform that is not required, however, is a reduction in the absolute number of codes.[4] Coding systems are used to report physician services for purposes

[4] Obviously, the total number of codes should remain within reasonable limits. A coding system must continue to be efficient for physicians to use and carriers to administer.

other than payment, and when a greater number of codes is associated with greater precision in definition, it allows physicians to report their services more accurately. In implementing a fee schedule, these different codes need not be associated with different payments. If different codes represent services that are similar in value, they should be reimbursed at a similar rate.

It is important to differentiate problems related to coding from those involving relative values. The Omnibus Budget Reconciliation Act of 1986 directed the Secretary of HHS to study the potential for reducing the number of codes used by carriers for payment purposes, including merging of similar codes into a single category. This activity was intended to minimize inappropriate increases in the intensity of services billed by reducing code distinctions that do not reflect substantial differences in services rendered. This has been referred to as the "aggregation of codes for payment purposes" and has traditionally been considered to be a coding issue. In fact, it is more accurately a problem in relative values.

Aggregation of codes is meant to discourage billing for more intense, extensive, or costly levels of service than provided. This occurs when distinctions between closely related codes are not clear and when payment for closely related services is different and inappropriate. Ambiguous distinctions between codes is a problem that must be addressed by coding reform. But codes that are defined clearly and implemented uniformly can still be subject to inappropriate use if differences in payment for services that are similar in value remain large. To prevent this and to discourage physicians from providing more intense, extensive, costly levels of service than indicated, it is not necessary to aggregate codes if the appropriate value and fee are assigned to each service. This can best be accomplished in the general context of establishing the relative values of services.

Goals of Coding Reform

In assessing options for coding reform the Commission is guided by goals that are consistent with its overall policy for physician payment in the Medicare program.

Consistency, Clarity, and Standardization. Each code should represent specific, standardized, and verifiable services. Each code should be understood clearly and uniformly by all providers, payers, and beneficiaries. Separate codes should be assigned to services that can be consistently and verifiably differentiated by providers and carriers.

Administrative Simplicity. A coding system for physician reimbursement should be simple and efficient for physicians to use and carriers to administer.

Access and Quality of Care. To protect beneficiary access to services, changes in coding should not remove incentives for physicians to provide appropriate services or to care for patients with complex conditions.

Equity Among Physicians. Coding reforms should distinguish services that are clearly different and should allow for differences among patients that are associated with significant differences in physician work.

Financial Incentives. Coding reforms should facilitate the appropriate use of codes and should improve the ability of carriers to detect misuse. Coding systems are associated with implicit financial incentives and disincentives that

influence the provision of medical services. Systems that code separately for services encourage physicians to provide more of each service; systems that package services can discourage the provision of included services. If coding reforms are used to address inappropriate increases in the intensity and volume of physician services, such reforms should not compromise the provision of necessary services or access to care for beneficiaries.

Orderly Change. Coding reform should be orderly and coherent. To avoid disruptive change, coding reform should respect the way physicians view their work and should be implemented at the carrier level in conjunction with the fee schedule.

Strategy for Coding Reform

The Commission has completed its analysis of several important matters in coding and has developed a strategy for coding reform. This chapter will focus on global services and will provide a review of CPT coding for global services and Medicare carrier implementation of these codes; a discussion of global service coding requirements for the RVS and fee schedule; and an analysis of the issues involved in standardizing global services. A process for standardization will be presented that uses an interspecialty consensus panel to develop a generic description of global services and groups of physician experts to identify the specific components of individual global services. The standardization of global services will not involve any change in CPT codes for these services. It will result in standardization of carrier interpretation and implementation of global service codes.

The second part of this chapter will focus on the relationship of coding to the relative values of services. The use of a consensus process to examine the relative values of closely related services and to address the potential importance of financial incentives in the assignment of fees to such services will be discussed. Another area for coding reform, visit services, will be the subject of chapter 5.

CODING FOR GLOBAL SERVICES

CPT contains codes for both individual and global services. A global service can be defined as a package of clinically related services paid for and coded as a whole. Although CPT provides general guidelines for global services,[5] the components to be included are ambiguous.[6] In addition and in accordance with the original intent of the Medicare program to accommodate differences in local practice, HCFA allows each carrier to define the specific components of each global service independently.

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[5] A surgical package includes the operation, local anesthesia, and normal uncomplicated postoperative care; a procedure package includes the procedure and recovery from that procedure.

[6] Although preoperative management is not mentioned in the CPT description of the surgical package, later instructions (modifier 56) imply that preoperative care is included.

A recent joint survey by HCFA, HIAA, and BCBS showed substantial variation in carrier policies with regard to the inclusion and extent of preoperative care (consultation and visits), postoperative care (hospital and office visits), perioperative procedures, and care for complications in the surgical package.[7] There was also no unified carrier policy on whether the surgical global fee was to be based on the typical case or an average of easy and difficult cases.

Carriers have not been surveyed on the nonsurgical procedure package, but anecdotal information suggests that significant variation exists here as well. For example, one Florida carrier, recognizing that different specialists do not view their services in the same way, defines endoscopy codes globally for surgeons and as isolated procedures with appropriately adjusted fees for gastroenterologists.

Such widespread variation means that CPT codes for global services do not represent the same combination of services from one case to another or from one carrier area to another. If a carrier's policy is not well publicized, physicians may find it difficult to bill appropriately for their services and to predict what a given carrier will pay. This ambiguity can result in inappropriate coding and improper payment. On the one hand, physicians may unbundle services or submit bills for global services and their component services. This can result in overpayment by Medicare and beneficiaries. On the other hand, physicians may use a global service code to cover complete services when carriers use it to cover partial services. This can result in underpayment by Medicare, which can increase balance billing or decrease access to care.

Medicare overpayment is related not only to the inaccurate use of codes but also to the ability of carriers to detect and correct misuse. Carriers report coding problems in 10 to 20 percent of claims[8] and a recent survey of 350 non-Medicare claims for surgery and invasive procedures found inaccurate coding in half of the claims (Holloway, Hertenstein, and Egdahl, 1987). Although individual physicians may submit bills that undervalue or overvalue their work, the net effect can account for 10 to 12 percent overpayment in program expenditures (Holloway, Hertenstein, and Egdahl, 1987).

Carriers may have problems detecting inaccurate use of codes. Carriers are required to maintain fee screens on each of the 7,000 CPT codes used in their area, to develop and implement policy on global services,[9] and to process a large number of claims in a timely manner. Effective review of claims may be hampered by the lack of sophisticated edit programs, the expense and difficulty of verifying inappropriate use of codes, and the delays related to suspended claims.

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[7] HCFA, HIAA, and BCBS, personal communication.

[8] Testimony presented to the PPRC by Dr. J. Gardam, Vice President for Medical Services (Government Health Programs), Prudential Insurance Company; September 10, 1987.

[9] Carriers may be required to implement multiple global service policies for various customers.

Global Services: Requirements for the RVS and Fee Schedule

Standardization of codes for global services is a prerequisite for developing and implementing a fee schedule. A global service can only be assigned an equitable value and fee if the components of that service are delineated clearly. A claim for a global service can receive proper review and payment only if the carrier and physician associate the same components with that service.

The introduction of a fee schedule not only requires standardization of global service codes but provides a unique opportunity to implement this reform. Standardization will change the interpretation of global services for many carriers. If implemented under the CPR method of determining physician payment, it would require large-scale recalculation of allowed fees. However, standardization introduced in conjunction with the fee schedule will not require additional calculation on the part of carriers.

Standardization of Global Services: Issues

In assessing the options for standardization, it is important to analyze the impact of potential global service packages on access to care, quality of care, equity among physicians, provision of services, Medicare expenditures, and efficiency of administration.

(1) What types of services should be considered for packaging?

A global service is a package of clinically related services paid for and coded as a whole. Although the concept of global care can be applied to any physician service, only physicians who perform surgery customarily view their work in this way. The general descriptions in CPT reflect this by defining the surgical package as the operation, local anesthesia, and normal uncomplicated postoperative care. The nonsurgical procedure package is simply the procedure and recovery from that procedure. There is no explicit package for medical services.

Initially, the Commission will limit its consideration to the surgical global service. This will respect the current practices of nonsurgical specialties and will avoid the substantial problems associated with packaging nonsurgical services: the high cost of ancillary services relative to the procedures themselves, the wide variation among patients undergoing the procedures, and the requirement (in the case of medical packages) for diagnosis-related codes. In the future, the Commission may want to explore these issues and broaden the applicability of the global service concept.

(2) What component services should be included in the global package?

In its most specific and limited form a surgical package would include only the operation; in its broadest interpretation it would include all services provided by all physicians in the intra- and perioperative care of the patient.

(a) Should the global service apply to one or more than one participating physician?

The multiphysician package could control costs by encouraging fee bargaining with surgical assistants and consultants and by reducing unnecessary use of their services.[10] It could reduce administrative paperwork and allow for regional variation in the specialist providing postoperative care.[11] In addition, by allowing for the inclusion of ancillary services by multiple providers, this type of package could encourage price-bargaining and cost-containment in diagnostic services as well.

The multiphysician package also has some unattractive features. At the present time there is no way to determine who would be paid, how the payment would be divided and who would control payment. If the primary surgeon was responsible for billing and distributing payment, he or she would be engaging in fee-splitting and would be assuming carrier duties. The multiphysician package could also create significant financial disincentives for surgeons to use the services of other physicians, which could deprive patients of necessary consultations and change relationships among physicians.

Some Blue Shield carriers are now experimenting with multiphysician packages for transplant surgery. In these cases payment is usually made to an academic medical center with salaried staff. In the future, if another administrative entity can be identified to receive and distribute payment--a hospital, a medical staff association, or a multispecialty group practice--the multiphysician package could be reconsidered.

(b) If the global service is limited to the services of one physician, what types of ancillary services should be included?

The global service could be constructed to include the operation, diagnostic and therapeutic procedures, local anesthesia, and office laboratory and imaging services (visit services will be discussed in the next section). If any or all of these services were to be included, the model would have to specify how commonly a service must be associated with a given operation, in what clinically meaningful length of time it must be provided, and the maximum allowed cost (relative to the cost of the operation) of a service for it to be included in the package. Services frequently provided by physicians other than the primary surgeon would be excluded. Ancillary services should reflect current practice rather than state-of-the-art medicine.[12]

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[10] If the principal surgeon was responsible for distributing payment, he or she would decide when a physician was needed as a surgical assistant, or when a nonphysician could perform the function as well at a lower cost.

[11] For example, in some centers cardiologists rather than thoracic surgeons provide postoperative care for patients undergoing coronary artery bypass grafts and optometrists rather than ophthalmologists provide postoperative care for patients undergoing cataract surgery. The extent of this practice is not known.

[12] It would not now be advisable to use global service definitions to establish guidelines for care.

Broadening the scope of the global service would decrease administrative paperwork and remove financial incentives for providing excessive services. However, because included services would no longer be itemized for payment, there would be less financial incentive for the surgeon to provide them. This could lead to substitution of another physician's services not included in the package or elimination of some services necessary for patient care.[13]

(c) What visit and consultation services provided by the surgeon should be included in the global package and how should the extent of these services be defined?

The global service could include (in addition to the operation and ancillary services) the initial consultation by the surgeon, preoperative and postoperative care in the hospital, and office follow-up visits. Visit services could be specified by number (for instance, three postoperative office visits) or by time (for example, hospital care for ten days, office follow-up for six weeks) that would apply to *all* operations. Alternatively, included visits could be defined as all expected care for the uncomplicated condition. The extent of expected care would then be determined specifically for *each* operation.

Surgeons view their work in global terms and naturally include postoperative care in the surgical package.[14] In the interests of orderly change the Commission would probably want to continue this practice.

In determining the extent of visit services included, the following points warrant consideration. First, the goals of coding reform should be congruent with anticipated reforms in relative values. Attention to the importance and value of nontechnical services could be highlighted by coding and paying for some visits such as the initial consultation separately.[15] Second, although it is unlikely that necessary packaged visit services would be withheld, this could be less the case as the value of each visit increases relative to the operation.[16] Third, access to care for patients with complex conditions should not be compromised. Physicians should be able to code outside the global service for the additional services associated with more complex treatment. Fourth, a policy should be established for situations where the surgeon does not provide the postoperative care.[17]

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[13] The risk of this occurring would be proportional to the cost of the ancillary service relative to the cost of the global service.

[14] In fact, postoperative hospital care is not considered as distinct visit services by many surgeons.

[15] This would focus attention on the importance of the decision of whether to operate and would compensate physicians directly for time and effort involved in counseling patients.

[16] The financial disincentive to provide these services would be counterbalanced by professional ethics, fear of malpractice litigation, utilization review and competition.

[17] The alternatives could include a modifier code to identify the component of postoperative care; separate packages for the operation and postoperative care; or no consideration for this problem (that is, surgeons must either provide the care themselves or pay another physician out of pocket).

(3) To what degree should global services be standardized?

One model for global service may be applicable to all surgery. Alternatively, several models may be necessary to account for variations in surgical practice relating to site of service, type of service, geographic location, and the specialist performing the surgery.

According to a recent survey (HCFA/HIAA/BCBS, personal communication) most carriers do not distinguish surgical packages on the basis of site of service. For operations that can be performed in either a hospital, a surgicenter, or an office, choice of site is most frequently related to coexisting medical problems, unusual risk, or complications; this distinction is usually associated with significant differences in physician work.[18] Although it is unlikely that patients would be denied hospitalization when necessary, the principle of physician equity would support some distinction on this basis.[19]

A generic model for global services that could be applied to all operations would have the advantages of standardization and simplicity. Carriers, physicians, and their staffs would know that packages for all operations included, for example, preoperative hospital care excluding the initial evaluation, the surgery, up to ten days of postoperative hospital care, and up to six weeks of outpatient management.[20] If the components of the global service were standardized but the value placed on each global service code was determined for a specific type of patient undergoing the operation specified by that code, for example, the expected services required by the uncomplicated cholecystectomy patient, then physicians could be penalized for caring for more complicated patients.[21] This could compromise access to care.

An alternative generic model would define the components and value of the global service for each operation.[22] In each case it would reflect the services

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[18] However, the increase in work does not always pertain to the surgeon. For example, a patient with uncontrolled diabetes mellitus could require intensive attention on the part of an internist or endocrinologist, while the work of the ophthalmologist performing cataract surgery would be unaffected.

[19] Differences in the components of global services could be distinguished by different codes or by site differentials.

[20] The Caterpillar Corporation model.

[21] The value of the cholecystectomy global service might be based on the five days of postoperative care required by the uncomplicated cholecystectomy patient. If the standard global service for all operations included up to ten days of postoperative care, the surgeon caring for the complicated cholecystectomy patient requiring ten days of care would have to absorb the loss.

[22] Specific components of each global service must be elucidated for other reasons: to calculate the value of each global service and to provide information for carriers for use in editing claims.

related to a certain type of surgery for a certain type of patient (for example, uncomplicated). Providing that the surgeon could bill outside the global fee for services required by a patient with a more complex condition, this model would be more equitable.[23]

Services involved in a given operation may vary depending on the surgeon's specialty. This could reflect different ways of conceptualizing the global package or differences in patient complexity. Similarly, regional variation may contribute to differences in global services. This could reflect differences in available expertise that determine the physician involved in postoperative care. In the interests of simplicity and in view of the growing trends toward national standards, variation in the content of global services by specialty or location should be respected only if associated with substantial differences in the content or complexity of work. The final decision in this regard should be integrated with the general policy adopted by the Commission with respect to specialty differentials and regional variation.

PROCESS FOR STANDARDIZING GLOBAL SERVICES

In its first annual report the Commission addressed issues related to coding reform and suggested the use of consensus panels to take advantage of the expertise of physicians and others in developing coding standards. The Commission has now developed a comprehensive program for the reform of global service codes. This program, to be implemented in 1988, uses an interspecialty consensus panel to develop a generic description of global services and groups of physician experts to identify the specific components of individual global services.

Standardization of global services does not require a change in CPT codes per se, but rather in the way these codes are interpreted and implemented by carriers. First, a number of general decisions must be made about global services: the types of services appropriate for packaging; the number of physicians involved; the ancillary services to be included (such as the operation, diagnostic and therapeutic procedures, local anesthesia, laboratory, imaging, and visits); the extent of these services and the way this should be defined; and the degree of standardization desired. These decisions can provide a generic description of global services.

The second task is to identify specific components for each global service code. Specific components must be known so that global services can be valued and information can be provided to carriers for use in editing global service claims. The generic model(s) for global services can provide the blueprint to implement this process.

The Interspecialty Consensus Panel

The consensus approach is well suited for the task of developing a generic description of global services, and the Commission will convene an interspecialty consensus panel for this purpose later in the year.

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[23] This discussion assumes the ability to bill for services not included in the package but required by a more complex patient. Since bills submitted in addition to a bill for a global service could be programmed to trigger carrier review of the claim, unnecessary extra billing could be curtailed.

Charge to the Panel. Some of the decisions in standardizing global services must be made by the Commission; others should form the basis for the deliberations of the consensus panel. After an analysis of the issues, the Commission has made the following decisions.

- Initially, the concept of global service should be limited to operations. Additional panels may be convened later to broaden the application of this concept.

- The global service should include only the services of the principal surgeon.

- The generic model for global service coding should not be used to determine guidelines for care or the extent of appropriate care. Services not included in the package should be billed and paid for separately.

- The value of a global service should be the sum of the values of its component parts.[24]

- The panel should make recommendations regarding the extent of the global service, the type of services to be included, and the criteria that would identify specific services for each operation (frequency of association, time frame for provision, and cost relative to the operation). In making these recommendations, the panel should not compromise the provision of necessary services or access to care by beneficiaries.

- The surgical global service should begin after the decision for surgery has been made; that is, the initial patient evaluation or surgical consultation should not be included in the package. The panel should make recommendations regarding the extent of other included visit services.

- The panel should make recomendations regarding the degree of standardization of the generic global service--whether one model should apply to all surgery or whether separate models should be used for different surgical subgroups or individual surgical procedures.

- The Commission should develop guidelines to address variation in the global service by location, specialty, and physician providing postoperative care.

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[24] The value of these components should be weighted by the frequency with which they are used (for example, the value of a service provided in 80 percent of cases should be weighted by 0.8), and should reflect the context in which they are performed (for example, the value of a splenectomy done in conjunction with a gastrectomy is less than the value of a splenectomy performed as an isolated procedure).

Membership. Since the interspecialty panel will limit its consideration to surgical global services, members will include representatives of all specialties involved in the surgical care of Medicare patients, representatives of selected carriers, as well as consumer representatives.[25] Representatives of CPT and HCFA will be invited to contribute as resources to the panel. Nominations for physicians will be solicited from the advisory councils of the American Medical Association, the American College of Surgeons, the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the various surgical specialty societies. Each will be asked to nominate three candidates, with the understanding that the Commission will choose two for each specialty and that the individuals chosen will not represent the nominating organizations. Participants will reflect existing geographic and practice variation among surgeons, but each will be expected to have knowledge of that specialty's practice throughout the country. Nominations for medical directors of carriers will be elicited from HCFA, HIAA, and Blue Shield.

In view of the large number of specialties and the benefits of having more than one representive from each specialty, the number of participants may be unwieldy for one panel. For this reason, the Commission will convene several concurrent panels.

Data. The Commission will obtain data to assist the panel in its work. Some or all of the following information will be provided.

- Guidelines of the Commission.
- Medicare carrier variation in the definition of global service. This would include the HCFA/HIAA/BCBS carrier survey (if published) for carrier variation with regard to general policy and the PPRC carrier survey (in progress) for carrier variation with regard to specific procedures.
- The global service as defined empirically from utilization data. The Commission has contracted for a study of high-priority Medicare procedures that will identify codes for services commonly associated with each in a clinically meaningful length of time. This will include the frequency of each associated service and information about geographic variation. It may also be possible to get information about providers (other than the primary surgeon) involved in the delivery of postoperative care by looking at charges for visit services with unbundled carriers.
- Prospective Payment Assessment Commission (ProPAC) data. This will include data from diagnosis related groups (DRGs) about average length of stay and ancillary services associated with inpatient and ambulatory surgery.

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[25] The specialties include family practice, general surgery, thoracic surgery, cardiovascular surgery, neurosurgery, urology, otolaryngology, orthopedic surgery, plastic surgery, endocrine surgery, cancer surgery, trauma surgery, ophthalmology, vascular surgery, gynecologic surgery, and oral surgery.

- Information on advantages and disadvantages of various definitions of global service provided by CPT, HCFA, the American College of Surgeons, private insurers and from Canadian provinces.

- Surveys of surgical societies for information on postoperative care provided by nonsurgeons; inpatient and outpatient surgery and identification of operations frequently performed in both sites, and variables responsible for choice of site.[26]

Identification of Specific Components of Each Global Service

The specific components of each global service must be known for two reasons: to calculate a value for the global service from a potentially unbundled relative value scale and to provide information for carriers for use in editing claims.[27]

Bound by the generic description of global services developed by the interspecialty panel, surgeons will be asked to elaborate specific components for each service. These will include the components of the operative procedure itself, especially those with distinct CPT codes, physician services related to ancillary procedures, and the appropriate number and type of visit services specified by the model. Data that will be helpful to the experts, such as ProPAC/DRG data and utilization data, will be provided. The technical experts will also be asked to identify obsolete codes.

This work needs to be done but is tedious, technical, and potentially expensive. Surgeons who can function as technical experts will be identified by such organizations as the American Medical Association and the American College of Surgeons, specialty societies, Peer Review Organizations, and carriers. The specific methodology has not yet been developed, but one option would be to use the Delphi technique with more than one physician involved in identifying the components for any one global service.

As an example, consider the work of a urologist identifying the components of the transurethral prostatectomy global service. Assume that the interspecialty panel has defined the generic global service as the operation, intraoperative procedures performed by the surgeon in more than 60 percent of uncomplicated cases, diagnostic and therapeutic procedures performed by the surgeon in more than 60 percent of uncomplicated cases within five days of the surgery, and all expected hospital visits (excluding initial consult) and follow-up office visits for up to six months for the uncomplicated patient.

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[26] Information relating to site of service can also be obtained from Part B Medicare Annual Data (BMAD).

[27] It is this information that will curtail unbundling and double billing.

A technical expert would include the following codes in the TURP global service:

52601	Prostatectomy, transurethral resection
52204	Cystourethroscopy
53600	Urethral dilatation
51741	Uroflowmetry
51726	Cystometrogram
53670	Urethral catheterization
90215	Intermediate initial hospital visit
90250	Limited subsequent hospital visits (4)
90292	Hospital discharge day management
90050	Limited office visits (2)

The expert would exclude the following codes:

55250	Vasectomy
53020	Urethral meatotomy
53000	Urethrotomy
74400	IVP
76705	Ultrasound, abdomen, limited (rectal)
90620	Comprehensive office consult
90050	Limited office visits after 6 months

The services excluded are either performed in less than 60 percent of uncomplicated cases, performed only in complicated cases, frequently performed by physicians other than the primary surgeon, such as a radiologist, or are specifically excluded from the model. Physicians providing these services would bill and be paid for them separately.

RELATIVE VALUES OF CLOSELY RELATED SERVICES

As discussed earlier, two goals of the Commission are to prevent misuse of codes by physicians and to reduce inappropriate increases in the intensity and volume of services. To discourage physicians from billing for more intense and costly levels of service than provided and to discourage them from providing such services when they are not indicated, more than coding reform is needed. The appropriate value and fee must be assigned to each service.

Inappropriate fees can influence the the way that codes are used. Fees that are too low may encourage physicians to provide and bill for higher levels of service. Fees that are too high may encourage them to provide and bill for more of those services. For this reason, misuse of codes cannot be considered independently of the relative values of services.

Current allowed charges may be substantially different for services of similar value. Consider a group of CPT codes for various types of sigmoidoscopy:

SIGMOIDOSCOPY, FLEXIBLE FIBEROPTIC

45330	diagnostic
45331	for biopsy
45332	for removal of foreign body
45333	for removal of polypoid lesion(s)
45334	for control of hemorrhage
45336	for ablation of tumor or mucosal lesion
45337	for decompression of volvulus

Each of these codes is unambiguous and represents a specific, distinguishable, and verifiable service. It is unlikely that a physician would use one of these codes when the service it represents was not provided. However, since a biopsy can increase the Medicare allowed charge for sigmoidoscopy by 60 percent (Mitchell and Cantwell, 1984), and since the indications for biopsy are broad, current charges may create financial incentives for providing unnecessary biopsies. This incentive would be magnified if physicians perceive the allowed charge for flexible sigmoidoscopy as too low.

The Medicare fee schedule would establish more equitable fees for services, and the Commission has endorsed the concept of a relative value scale based primarily on resource costs to accomplish this. The RVS currently under development (Hsiao, et al. 1987) is not studying each CPT code directly. For families of closely related codes, such as the sigmoidoscopy group above, only one member is the subject of investigation and the values of related codes will be assigned on the basis of current charge information. This approach may perpetuate current problems.

In the context of specialty consensus panels that may be convened to examine the RVS, the Commission could address the relative values of closely related services. At the same time, these panels could address the potential importance of financial incentives in the assignment of fees to such services. The Commission is now developing a specific process to accomplish this.

CONCLUSIONS

- Codes that are interpreted and implemented in a uniform manner are a prerequisite for a Medicare fee schedule.

- Standardization of carrier interpretation and implementation of codes for surgical global services is one requirement for this reform.

- Global service codes will be standardized by a consensus process and will be implemented at the carrier level using existing CPT codes.

- The accurate assignment of relative values can remove incentives to use codes inappropriately. Coding reform must be integrated with reform in the relative values of services.

CHAPTER 5 TOWARD REFORM IN THE CODING OF VISITS

Services performed by physicians during visits with patients are difficult to describe clearly in a coding system, and this can create unique problems with valuing and paying for such services under a fee schedule. Unlike codes for global surgical services, visit codes may remain ambiguous after their implementation is standardized across carriers.

Visits are important services that are provided by most physicians. They also account for a sizable portion of Medicare Part B expenditures. For these reasons the Commission places a high priority on evaluating visit codes, and ensuring that they are interpreted uniformly, specifically, and reliably under the fee schedule. This chapter reflects the initial thinking of the Commission on this subject. It provides an analysis of current problems and examines several options for reform.

BACKGROUND

Physicians provide two distinct types of services: technical procedures and visit or consulting services. Technical procedures are represented by approximately 6,900 codes in *Common Procedural Terminology* (CPT). Each procedure is specific, relatively uniform in content, and performed by a limited number of specialties. Visit services are represented by fewer than 100 codes in CPT. Each visit code is used by virtually all physicians and consequently must represent a heterogeneous set of services.

Codes for technical procedures describe *what* physicians do. CPT codes for visit services (for the most part) describe *where* they do it and to *whom*.[1] As would be expected of codes that do not represent uniform or explicit services, visit categories (for example, new or established patient, initial or follow-up service, and site of service) function as proxies for differences in the content of visits. Levels of service within each category (minimal, brief, limited, intermediate, extended, comprehensive, or complex) describe differences in the duration, scope and intensity of physician input.

Proxies in a coding system are effective if they correlate well with these

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[1] CPT visit codes are classified as office medical services, home medical services, hospital services, skilled care facility services, nursing home services, emergency department services for hospital-based and nonhospital-based physicians, consultations, concurrent care services, preventive medicine services, critical care services, telephone services, after-hours and holiday services, and specialized services (for example, psychiatric and ophthalmologic visit services, postoperative visit services, and confirmatory consultation services). Categories are further subdivided into initial, follow-up, and discharge services for new or established patients. Several levels of service (minimal, brief, limited, intermediate, extended, comprehensive, or complex) apply to each type of visit.

differences and are interpreted uniformly. If each visit category correlates with specific visit services and if each level of service describes consistent amounts of work, each code can be used in the same way by different physicians and when applied to different patients.

Proxies in CPT visit codes may not accomplish this effectively. Physicians have not been surveyed directly with regard to the way they interpret the codes, but some evidence suggests that they do not use them to represent services of uniform content or work. Although differences may occur among physicians within each specialty, the only available data compares physicians across specialties. In the University of Southern California National Study of Medical and Surgical Specialties, family practitioners were found to spend consistently less time than internists in patient encounters with the same level of intensity (Mendenhall, 1981).[2] This probably is equivalent to comparing encounters assigned the same visit code, since the levels of intensity in the survey were identical with those used by CPT at the time, and the findings were the same when matched by patient classification (new or established) and site of service. In data compiled from the USC study and the Area Resource File, these differences were extended to other specialties (cardiologists, pediatricians, and orthopedic surgeons) and were related to differences in visit content as well as duration (Greenwald et al., 1984).

If CPT codes for visit services are not interpreted uniformly by physicians, they may not be applied consistently or appropriately. If adjacent levels of service are interpreted as close substitutes but payment for these levels differs substantially, physicians may be encouraged to bill under the level that generates the higher approved charge. For example, the Medicare carrier for New Jersey allows an internist more than twice the payment for an intermediate office visit as for a limited office visit; this could encourage upcoding. Under Medicare's Maximum Allowable Actual Charge Program, higher charges are sometimes allowed for the lower of two adjacent levels of service; this could encourage undercoding. Since it is difficult for physicians to distinguish and for carriers to verify these levels of service, inaccurate coding may be unavoidable and undetectable under the current system.[3] Visits account for 30

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[2] Differences in physician input should not be interpreted as representing differences in the quality or efficiency of care.

[3] A limited level of service is defined as "pertaining to the evaluation of a circumscribed acute illness or to the periodic reevaluation of a problem, including an interval history and examination, the review of effectiveness of past medical management, the ordering and evaluation of appropriate diagnostic tests, the adjustment of therapeutic management as indicated, and the discussion of findings and/or medical management." An intermediate level of service is defined as "pertaining to the evaluation of a new or existing condition complicated with a new diagnostic or management problem not necessarily relating to the primary diagnosis that necessitates the obtaining and evaluation of pertinent history and physical or mental status findings, diagnostic tests and procedures, and the ordering of appropriate therapeutic management; or a formal patient, family or hospital staff conference regarding patient medical management and progress."

percent of approved physician charges under Medicare.[4] Although the extent of inaccurate coding is not known, it could have an important impact on Medicare expenditures.

If CPT codes for visit services are not implemented consistently by carriers, payment may be variable and inequitable. Under the Medicare customary, prevailing, and reasonable (CPR) method for determining physician reimbursement, the way carriers pay specialists for different levels and categories of service varies considerably. For example, one New York Medicare carrier pays the same fee for an internist's limited or intermediate office visit, whereas the New Jersey carrier referred to above recognizes a twofold difference. The New York carrier recognizes only two groups of specialists (general or family practitioners and all other specialists) for distinct payment; the New Jersey carrier recognizes and establishes separate office visit fees for each specialty.[5] Some carriers do not allow any payment for certain specialists who provide office visits.[6] Such variation in carrier policy is confusing to physicians and inherently inequitable. It can also create problems for beneficiaries. If physicians do not receive appropriate reimbursement for their services, some beneficiaries may be penalized by increases in balance billing or decreased access to care.

VISIT CODES: RELATIVE VALUES AND THE FEE SCHEDULE

Problems with the current system for coding visit services under Medicare could weaken the effectiveness of a fee schedule. Some of the problems could be corrected by standardizing carrier implementation of visit codes. For example, if proxies such as type of patient, site of service, level of service, sequence of care, and specialist providing care are used to reflect differences in the content and work of visits under a fee schedule, they should be implemented uniformly.[7] Payment would then be predictable and more equitable, which would remove some of the current incentives for using visit codes inappropriately. As discussed in chapter 4, the Commission is recommending uniform carrier implementation of codes under the fee schedule.

Some problems, however, may not be so amenable to a solution at the carrier level. If physicians have difficulty distinguishing one visit code from another, they may not apply them accurately. If carriers have difficulty with verification, they may not be able to detect misuse. If physicians and carriers do not interpret visit codes similarly, assigned fees may not apply to the intended services. These problems would persist regardless of carrier standardization.

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[4] Staff analysis of the 1985 Part B Medicare Annual Data (BMAD) file.

[5] Specialty differentials are considered in detail in chapter 6.

[6] This is a problem for some psychiatrists. Some carriers will accept only psychotherapy codes from these physicians.

[7] This does not mean that all proxies would have to be recognized under a fee schedule.

Problems with visit codes could also compromise the development of a relative value scale. The Commission has endorsed the concept of resource costs as the primary basis for such a scale. If the relative values of services are to be determined by the average costs of providing them (physician time and effort, and overhead), each code should represent a similar resource cost to the different physicians who use it.[8] This is likely to be the case with CPT codes for technical procedures because these codes are defined by specific services.[9] If different physicians associate the same service with each code, their estimates of resource costs can be used to assign an accurate relative value. These estimates may not be reliable for visit services because CPT visit codes are defined in terms of proxies. If the proxies do not correlate with resource costs in a similar way for different physicians, it may be difficult to assign an accurate value.

The current work to develop a resource-based RVS (Hsiao et al., 1987) may help clarify how CPT codes are now used by physicians and quantify the range of resource costs each represents. In this study the units of analysis are services and procedures enumerated by CPT. These are presented in the form of clinical vignettes, and physicians are asked to rate the total work, time, and components of intensity (physical effort and skill, mental effort and judgment, stress, iatrogenic risk) for each service or procedure by comparison with a specialty-specific standard. Estimations of time and intensity that are different for different physicians rating the same visit vignette and for different specialists rating different vignettes with the same CPT code could identify differences in the interpretation of visit codes within and across specialties. A broad range of interpretation could complicate the assignment of accurate relative values to visit services.

IMPROVING THE SPECIFICITY OF VISIT CODING

The Commission plans to survey physicians to ascertain the specificity and reliability of CPT visit codes and their correlation with resource costs. If these codes do not represent the same services or resource costs when used by different physicians, and if they are found to be difficult to distinguish and verify, reform in addition to carrier standardization should be pursued.

The remainder of this chapter discusses possible options for reforming visit codes. It is important to point out, however, that the absolute need for such reform has not yet been established. Moreover, the Commission has not endorsed any of the options described. Nonetheless, the Commission believes that some reform is likely to be necessary and places a high priority on exploring alternatives.

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[8] The assignment of a resource cost and value to a code does not mean that Medicare is required to pay for that code.

[9] CPT codes for most individual technical procedures represent uniformly understood services. CPT codes for surgical global services are not interpreted uniformly by carriers and will require standardization (see chapter 4).

Goals of Reform

Reform is intended to create visit codes that represent services with similar resource costs to the different physicians who use them. Options for reform will be measured against the goals described in chapter 4.

- Codes should be understood clearly and uniformly by all providers, payers, and beneficiaries.
- Separate codes should be assigned to services that can be consistently and verifiably differentiated by providers and carriers.
- Codes should be simple and efficient for physicians to use and carriers to administer.
- Coding reform should facilitate the appropriate use of codes and improve the ability of carriers to detect misuse.
- Coding reform should not compromise access to care or quality of care.
- Coding reform should be orderly and coherent and respect the way physicians view their work.
- Coding reform should promote equity among physicians.

Refinement of CPT Visit Codes

The least disruptive reform would be to refine the visit codes currently in use. This could involve clarifying the definitions for levels of service or creating additional proxies, or both.

Levels of Service. Under the current system it is difficult to consistently describe differences in the duration, scope, and intensity of visit services and correlate them with distinct differences in physician work. This is a problem because visits are not single services, but entail variable combinations of component services.[10]

CPT uses seven descriptors for levels of service (minimal, brief, limited, intermediate, extended, comprehensive, and complex) and provides definitions and examples to illustrate each. Refining these descriptions to make them more reliable and precise is difficult because each level must account for so many potential combinations of component services. If, for example, an intermediate level of service is to reflect a specific amount of a physician's time and effort, it must apply not only to a visit consisting of an intermediate level of each component service, but also to visits consisting of various combinations of higher and lower levels of component services that, on average, represent an intermediate composite service. It would be unwieldy to provide examples of all possibilities.

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[10] CPT definitions of levels of service suggest that each visit is composed of a history, a physical examination, a review of records, the ordering and evaluation of diagnostic tests and procedures, the ordering and adjustment of therapeutic management, and counseling.

If levels of service are to be used to classify visits, they must be demonstrated to result in uniform interpretation and application of visit codes. Current levels of service, and any refinements, should be assessed objectively by evaluating and testing them with a representative group of physicians.

Proxies. CPT uses various proxies to account for differences in physician input: type of patient (new or established), site of service (office, hospital, skilled care facility, nursing home, emergency department, critical care unit), and sequence of care (initial, follow-up, and discharge services). Proxies can be an effective means of classifying visits if they correlate well with the work actually performed and represent similar resource costs to different physicians. As discussed above, objective information about the effectiveness of proxies in current codes may soon be available.

If each category of CPT visit code is found to encompass too broad a range of physician input, new proxies could be added to improve specificity. For example, categories could be subdivided to reflect the age of the patient, comorbidity, or the severity of illness. Such refinements would be clinically relevant but not necessarily simple to use. Patient age is clear and verifiable, but comorbidity and severity of illness are more difficult to define.[11]

Each new proxy has the potential for multiplying the number of visit codes twofold or more. Such an expansion would be warranted only by a substantial and documented improvement in specificity. What little information is available suggests that this may be unlikely. In the USC-Mendenhall study, patient age and comorbidity did not account for most of the differences observed among different specialists in patient encounters that entailed the same level of intensity.

Potential New Bases for Visit Codes

The introduction of new visit codes could be disruptive; physicians and their staffs, carriers, and beneficiaries would have to become familiar with a new system. For this reason a new basis for classifying visit services should be considered only if the current system cannot provide a sound basis for valuing, reporting, and paying for these services. Any new system under consideration should therefore not only be feasible and acceptable, but it must also be more uniform, specific, and reliable than the current system.

Time. The duration of a visit would appear to be an attractive basis for classification because it is one element that clearly contributes to the resource costs of physician services. Moreover, time is a simple concept for physicians, carriers, and beneficiaries to understand and measure, and it can be verified by carriers.[12]

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[11] Should comorbidity refer to any of a patient's problems, or only to those that have a direct impact on the chief complaint? If the latter, how should that impact be defined? Similarly, how should the description of severity of illness be calibrated so that it would be used consistently and uniformly by different physicians?

[12] Although the duration of a visit can be verified (for example, a patient can be asked to sign a statement at the end of the visit), a notation of time spent does not allow verification that any specific service was performed.

The use of time as the sole criterion for classifying visits would be problematic, however. Although it is possible to define visit duration for use in a coding system, several decisions would have to be made first. Should time apply only to patient contact with a physician, or should it also apply to contact with nurses, educators, dietitians, and laboratory personnel? Should it reflect the minutes of actual contact, or should it be quantified into discrete units for billing and payment?[13]

Time is only one of several elements that determine the resource costs of visit services, and it may occasionally substitute for other elements rather than correlate with them.[14] A more highly skilled and efficient physician may require less time to provide services to a patient. When time relates inversely to skill and judgment, it is not an accurate reflection of work performed.

Finally, time is not used as the sole basis for classifying other physician services, and a strong argument would have to be made to justify its use as a sole basis for visit services.[15]

Diagnosis. The most widely used classification scheme based on diagnosis is the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM), which has been used to classify inpatient care in terms of diagnosis related groups and outpatient visits in terms of ambulatory visit groups (Schneider, et al., 1986). Diagnosis could be considered as a sole basis for defining visit services. It is a clinically meaningful classification system and would provide clear, distinguishable, and verifiable visit codes.[16]

However, there also would be potential problems. Most important, each code would not necessarily represent the use of homogeneous resources. Diagnosis correlates best with resource use when patients with a given diagnosis are cared for by only one type of physician in a uniform way. While such care is often provided for patients undergoing invasive procedures, it is rarely the case when patients are seen for visits. The visit service of an oncologist caring for a patient with metastatic breast cancer is quite different from that of a surgeon providing postmastectomy care for a patient with the same diagnosis. The visit service of a cardiologist evaluating a patient for ischemic heart disease can be very different from that of the general internist or family practitioner who referred the patient.

Some of this variation is caused by differences among specialties. Different specialists may provide different services to patients with similar diagnoses, and one type of specialist may care for patients with more complex presentations of

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[13] For example, each unit could represent ten minutes. If this method were used, how would payment be determined for a fifteen-minute visit?

[14] The other elements are physician effort (physical effort, skill, mental effort, judgment, stress, iatrogenic risk) and overhead.

[15] For example, it would have to be shown that time has a much better correlation with total resource costs for visits than for other services.

[16] Assuming that a physician knows the diagnosis of a patient at the time of the visit.

a diagnosis than another. Some variation can be accounted for by differences among physicians within each specialty. A physician with greater expertise, for instance, may care for more severely ill patients and provide them with more sophisticated therapy than a less skilled physician. A coding system for visit services should not remove incentives for physicians to provide appropriate services or care for patients with complex conditions. A system based on diagnosis alone would not satisfy this requirement.

Classifying visits on the basis of ambulatory visit groups (AVGs) does not rely only on diagnosis. Instead, AVGs use principal diagnosis and type of patient (new or established) to describe office visits that are likely to entail similar amounts of time.[17] This system, which consists of 285 procedural and 285 medical AVGs,[18] is currently being evaluated in several clinical settings: HMOs, emergency departments, and hospital outpatient departments.

This system could be considered for coding visits under Medicare if several problems could be successfully addressed. AVGs share problems with other systems based on diagnosis because they do not account for differences in resource use across sites (for example, a patient with chest pain seen in an emergency room as opposed to an outpatient clinic), nor do they account for systematic and legitimate differences in resource use across specialties (for example, a patient with headache seen by an internist as opposed to a neurologist). AVGs also share problems with systems based on time. Each AVG describes a set of office visits likely to require a similar amount of time, but time does not always correlate with total resource costs. In a study validating the groups on an HMO data base, AVGs were found to account for only one-third of the variance in cost per visit.[19] AVGs may thus not represent an improvement over current CPT visit codes.

Outcome. Some have suggested that patient outcome, the documented benefit of services for a population of patients with a specific condition, be used as a basis for physician payment.[20] If used in coding, outcome would classify visit services on the basis of their expected benefit to patients. Services would not be represented by codes when provided for patients who would not benefit from them.

Outcome could not be used as a sole basis for classifying visits, and even using it as a proxy in a system based on diagnosis may not be feasible. There is too little data with which to judge various medical approaches to problems and to determine the appropriate indications for their use. Without such information, a

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[17] For some diagnoses, visits are further classified according to symptoms or therapy (for example, chest pain or chemotherapy). Additional characteristics such as sex and age are used to check the validity of a diagnosis.

[18] Procedural AVGs are CPT-4 codes for outpatient procedures that have been aggregated on the basis of time and, to a lesser extent, historical charges.

[19] Mark Hornbrook, personal communication.

[20] Outcome does not refer to the actual outcome of specific patients. It is rather the statistical outcome of a population of patients. The specific outcome of patients would be an undesirable method for determining payment. Medicine is not a perfect science, and outcome is not determined solely by the services of the physician. It would therefore be unfair to code or pay for services on this basis.

given approach cannot be designated as having a better outcome than another. Even if such information were available, it would have to take into account the spectrum of quality in outcome, the patient population to whom it would apply, and the length of time necessary to determine if an outcome is favorable.[21]

In addition, a coding system describes what physicians do, not whether they should do it. Means other than coding are better suited to establish guidelines for care.[22] Of course, services of no marginal benefit need not be covered for payment.[23]

Content. Visit codes based on content would be similar to CPT codes for technical procedures in that each code would be based on uniform and explicit physician services. Since each visit is a composite of several component services, one way of describing the content of visits would be to use separate codes for each component. Possible categories for such a system are discussed in the appendix to this chapter.

Visit codes defined by specific services could have several advantages. First, they could allow for a more accurate description of physician services. Different physicians would associate the same service with the same code, and their estimates of resource costs could be used to assign reliable relative values to each code. Second, specific services would be easier to distinguish and verify, which could facilitate appropriate use and improve the ability of carriers to detect misuse. Third, visit codes based on content could obviate the need for specialty differentials. If specialists provided different services to patients, this could be recognized directly with different codes.

However, visit codes based on content could be considered by Medicare only if several problems could be successfully addressed. Although such a system could reduce the total number of visit codes because proxies in current use (type of patient, site of service, sequence of care) would not be necessary, physicians would be required to submit more codes for each visit. This could complicate billing and payment. It is also unlikely that one code for each category of component service would provide the necessary specificity. Each category probably would require codes for several levels of intensity. And, although it is easier to calibrate levels of intensity for a uniform category of service than for a composite service, it would still be necessary to demonstrate that physicians could apply such levels specifically and consistently. Finally, verifying these codes could be expensive for carriers and burdensome for physicians. If physicians were not audited, disaggregated visit codes could increase Medicare expenditures.

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[21] The spectrum of quality can be designated as unacceptable, poor, average, good, or excellent. The patient population is the percent of patients and types of patients who would benefit from each approach.

[22] These include peer review, quality assurance, formal guidelines, and physician education.

[23] Not all CPT codes are currently covered under Medicare.

Work Plan

The Commission is interested in working with all interested parties to evaluate current codes and develop a strategy for reform. As a first step in this direction, it plans to survey physicians to ascertain the specificity and reliability of CPT visit codes and their correlation with resource costs. If the current system cannot provide a sound basis for valuing, reporting and paying for visit services, the Commission will convene a conference to explore possible options for reform.

CONCLUSIONS

- Carrier implementation of visit codes should be standardized under the fee schedule.
- The Commission will survey physicians to ascertain the specificity and reliability of CPT visit codes and their correlation with resource costs.
- If the current system cannot provide a sound basis for valuing, reporting, and paying for visit services, reform of visit codes may be necessary.
- Any proposed reform should be acceptable to physicians and payers and result in a system that is more uniform, specific, and reliable than the system in current use.

APPENDIX 5

DESCRIBING THE CONTENT OF VISITS

Visits have been described as single services, but they are more accurately a combination of distinct component services. Much of the observed heterogeneity in a particular visit (for example, an intermediate office visit) can be accounted for by differences in the type and intensity of components included in the visit.

A coding system based on content could be approached by using separate codes for each category of component service. Sample categories could include the following:

- Evaluation services. These services include the patient's history and physical examination. The scope of evaluation could be broad (for example, a general history and physical examination) or focused on one body system.

- Services to establish a patient. These include one-time services such as creating an office record, reviewing old records, and taking a family history, social history, and past medical history. They also include hospital recordkeeping services such as dictating admission and discharge records.

- Preventive services. These services include pap smears, stool guaiacs, general dietary and exercise guidelines, and so forth.[1]

- Therapeutic interventions. These services include office interventions such as therapeutic injections or administration of chemotherapy, as well as hospital orders.

- Patient counseling. This category includes formal educational services provided by the physician (standardized diabetes education pertaining to insulin injection technique, home blood glucose monitoring, and so forth) as well as more informal patient education (review of fingerstick glucose results and adjustment of insulin regimen).[2]

- Case management services. These services include telephone or written contact by a referring physician to a consultant to review the medical history and give the reason for a consultation, and by a consultant to a referring physician to report the results of a consultation. They also include services by a primary physician responsible for coordinating patient care provided by several physicians.

- Literature review. This includes review of the literature directly related to the management of the individual patient.

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[1] Some preventive services such as immunizations have a distinct CPT code.

[2] Educational services provided by the office staff also could be included if visit codes were to recognize nonphysician services.

In a system with separate codes for each category of service, physicians would use a code from one or more categories to describe each visit.[3] Each category would have different codes for three or four levels of intensity.

Levels of intensity could be calibrated using standardized examples for each category, and specialty-specific examples could be used to describe unique services or unique applications of common services.[4] An advantage of this approach over the current system is that it would be easier to provide precise descriptions for a uniform category of service than for a composite service. Nonetheless, it would be necessary to demonstrate that physicians could apply these levels consistently and reliably.

Consider how two visit services might be coded under this hypothetical system as compared with CPT. The physician is an endocrinologist. Patient A is a brittle Type I diabetic who requires a substantial adjustment in insulin regimen and formal repeat instruction in home blood glucose monitoring. Patient B is a Type II diabetic, well controlled on diet therapy. CPT uses "review of interval history, physical status, and control of a diabetic patient" as an example of a limited level of service. Visits for both patients would be coded as a limited office visit for an established patient under CPT even though the services required would be quite different.

Under the component coding system, differences in the physician's time and effort for these two patients could be recognized. Care for patient A would involve more substantial review of interval history than for patient B. This could be captured by the use of a higher level evaluation service code. Similarly, patient A would require more extensive counseling and education than patient B, which could be captured by the use of a higher level patient counseling code. The hypothetical system would have the potential to describe visit services more accurately than CPT and could allow for more equitable payment for the physician and a more equitable charge for each patient.

Coding for visits on the basis of content could have several additional advantages. It could reduce the total number of visit codes, since proxies in current use, such as type of patient, site of service, and sequence of care, would not be necessary. It could incorporate and recognize the services of such nonphysician office professionals as oncology nurse specialists and diabetes nurse educators. Moreover, if global visit codes would be useful in coding for stereotypic services such as chemotherapy office visits, these could be constructed by combining the appropriate component parts. Potential disadvantages of such a system are discussed in the text.

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[3] This would usually involve three codes (with a maximum of seven codes) for each visit.

[4] One unique service could be chemotherapy administration. This might require a separate category of code.

CHAPTER 6 SPECIALTY DIFFERENTIALS IN A FEE SCHEDULE

Physicians of different specialties provide similar services. Different specialists may use the same code to describe and bill for services, particularly visits and consultations, that may in fact differ. A specialty differential is a difference in the amount paid to different specialists for services designated by the same procedure code.

Under the current system, Medicare allows each carrier wide discretion in developing its policy toward specialty differentials. As a result, patterns of using differentials vary widely. The patterns do not appear to reflect a coherent set of principles, nor do they consistently serve the objectives of the Medicare program. A policy for specialty differentials under a fee schedule should not be based on these patterns. However, any change in policy for specialty differentials before implementation of a fee schedule would impose substantial administrative costs on carriers and physicians, and its effects on access, cost, and quality would be difficult to predict.

The Commission has begun developing a uniform national policy for specialty differentials under a fee schedule. That policy would be consistent with the principles the Commission has established and with the recommendation that resource costs should be the primary basis for the relative value scale. In principle, the use of specialty differentials would recognize the value of the skill, judgment, and experience of more specialized physicians and would provide access to specialized services for Medicare beneficiaries.

Though the Commission is not ready to recommend a specific policy, it has narrowed the range of options, and the outline of a policy is taking shape. Under a fee schedule, specialty differentials would be considered only for services that differ when provided by different specialists. If a specialty differential were to be used for a service, its magnitude would be based on differences in resource costs, except where those differences were shown to represent inefficiency rather than additional expected benefits to patients.

Procedure codes could account for most differences in services, particularly for surgery and technical procedures. Many services requiring specialists' skills or expertise, including most surgery and technical procedures, are provided by only one or a few types of specialists. Payments for these services reward skill and expertise without the use of specialty differentials.

Differences in content of visits and consultations by specialty--differences in time, effort, skill, and judgment--have been demonstrated. It may be appropriate to recognize these differences in a fee schedule. Where they are to be recognized, it is preferable to so do through differences in the billing codes used, either by standardizing the use of current visit codes or perhaps by introducing new codes. Until this is feasible, specialty differentials for the same procedure code could be considered.

After implementation of the fee schedule, access to care for Medicare beneficiaries, including access to the services of specialists, must be monitored so that adjustments to relative values for selected services or specialists could be made if needed to ensure it.

If there are to be specialty differentials under the fee schedule, Medicare must develop a uniform national policy to designate appropriate physicians as specialists. The Commission is examining several options, including board certification, a physician's completion of specialty training, and specialized competence as attested by peers.

SPECIALTY DIFFERENTIALS UNDER CURRENT MEDICARE POLICY

At its beginning, the Medicare program adopted the customary, prevailing, and reasonable (CPR) method to determine physician payment rates. This method permitted carriers to recognize existing differences among services, specialties, and geographic areas. The intention was to ensure wider acceptance of the program by physicians and, by inference, access to care for beneficiaries comparable to that received by other insured persons.[1]

There is currently no uniform policy for setting Medicare prevailing charges by specialty. Carriers are granted wide discretion in interpreting and implementing the regulations.[2] They have considerable latitude in defining the members of a specialty group, in deciding whether existing patterns of charges for a specific service are sufficiently different to warrant separate prevailing charges for a specialty or subspecialty, and in determining what method to use to establish prevailing charge screens. The resulting patterns of charges by different specialists vary widely and inconsistently among carriers. Table 6-1 shows the range of differences in prevailing charges by specialty for one carrier (General Accounting Office, 1984).

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[1] Specialty differentials in Medicare presumably reflected the practices of insurance carriers when Medicare was established. Specialty differentials in the private sector may since have changed.

[2] The authorizing regulation, 42 CFR 405.504(b), states, "The range of prevailing charges in a locality may be different for physicians or persons who engage in a specialty practice or service than for others. Existing differentials in the level of charges between different kinds of practice or service could, in some localities, lead to the development of more than one range of prevailing charges for application by the carrier in its determinations of reasonable charges. Carrier decisions in this respect should be responsive to the existing patterns of charges by physicians and other persons who render covered services, and should establish differentials in the levels of charges between different kinds of practice or service only where in accord with such patterns."

Table 6-1: Prevailing Charges for Selected Medical Services in Urban Areas of New Jersey, by Specialty, January 1, 1985 to December 31, 1985[a]

HCPCS	Procedure	GP[b]	FP	IM	CD	GE	PD	GS	TS	NS
90020	Office Visit, New Comprehensive	40	65	65	75	65	65	75	60	65
90050	Office Visit, Limited	17	17	22	22	22	22	--	22	32
90060	Office Visit, Intermediate	37	38	46	46	--	--	40	35	--
90250	Hospital Visit, Limited	22	22	26	32	22	22	22	22	32
90620	Consultation, Comprehensive	115	100	150	125	119	119	125	150	81
43235	Endoscopy, Upper GI	314	425	400	334	314	--	325	314	--
45330	Sigmoidoscopy	110	127	110	110	110	110	110	110	--
33207	Insert Pacemaker	--	--	--	1156	--	--	1343	1827	--
35301	Rechanneling of Artery	--	--	--	--	--	--	2149	1827	2149
47600	Gallbladder Removal	924	--	924	924	924	--	1075	1032	--

Source: 1985 BMAD 1 and 1985 BMAD 2 Linkfile.

a. Charges in dollars.
b. GP--general practice, FP--family practice, IM--internal medicine, CD--cardiovascular disease, GE--gastroenterology, PD--pulmonary disease, GS--general surgery, TS--thoracic surgery, NS--neurological surgery.

Carriers vary in the way they identify the members of a specialty group. According to a 1985 survey of the Health Care Financing Administration, twenty-four carriers indicated that they allow physicians to self-designate, three require that physicians be board certified, and five accept board certification or equivalent training (Health Care Financing Administration, 1986).

Carriers also vary widely in how many different specialties they recognize with different prevailing charges. The HCFA survey found that five of the thirty-nine carriers responding make no distinctions among specialists and so have only one prevailing charge for each procedure. At the other extreme, seventeen

carriers establish a separate prevailing charge for each specialty. For example, Pennsylvania Blue Shield recognizes more than fifty different specialties. Fourteen carriers have an intermediate policy and combine specialties into several groups, each with a different prevailing charge.[3] A study by the General Accounting Office (1984) of eleven carriers further demonstrates the variations in the number of specialties recognized for setting prevailing charges (Table 6-2).

TABLE 6-2: Number of Prevailing Rates, by Carrier, 1984

Carrier and State	Number
Nationwide (Ohio and West Virginia)	31
Blue Cross and Blue Shield of South Carolina	31
Blue Cross and Blue Shield of Colorado	30
New Hampshire-Vermont Health Services	30
Blue Shield of Massachusetts[a]	25
Prudential Insurance Co. of America (Georgia)	23
CIGNA (Connecticut)	3
The Equitable Life Assurance Society of the United States (Wyoming)	2
Blue Cross and Blue Shield of Florida	1
Blue Cross and Blue Shield of North Dakota	1
Blue Cross and Blue Shield of Michigan	1

Source: General Accounting Office, 1984

According to the regulation authorizing the establishment of prevailing charges, the number of charges used by carriers should be based on the patterns of charges of physicians and other persons providing covered services. The 1984 GAO study indicated that little or no analysis had been conducted by the carriers to support the specialty distinctions they used. In fact, only three of the carriers had done any analysis of physicians' charges.[4]

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[a] Massachusetts recognizes twenty-five specialties for visits, but only two groups of specialists (general practitioners and family practitioners, and all other physicians) for all other services.

[3] For instance, Empire Blue Cross and Blue Shield (New York) sets two prevailing charges for each procedure, one for nonspecialists and a second for specialists. The group of nonspecialists includes general practitioners, family practitioners who are not board certified, oral surgeons, optometrists, podiatrists, chiropractors, and physical therapists. All others are considered specialists.

[4] In one case the carrier's implementation of this regulation was changed as the result of a legal challenge. The courts ordered the carrier, Blue Cross and Blue Shield of Michigan, to discontinue the differential treatment of specialists and nonspecialists because there was no factual basis for the way the payment screens had been set.

The patterns of specialty differentials vary widely among carriers, and are confusing and increase the complexity of the program. In some instances, physicians of different specialties are subject to different prevailing charges, though the service is the same. Specialty differentials now provide inconsistent and in some cases distorted signals to physicians about which services to provide and what specialized training to undertake. Their effects on beneficiary costs and on access and the quality of care are not known, and presumably vary from service to service and carrier to carrier. Clearly, a policy for specialty differentials under a Medicare fee schedule should not be based on the patterns in the current system.

SPECIALTY DIFFERENTIALS UNDER A FEE SCHEDULE

The Commission must develop a Medicare policy on specialty differentials that is consistent with the Commission's principles for reform and its recommended basis for a relative value scale. The key issues are whether there should be specialty differentials under a fee schedule, and if so, to which services and physicians a differential should apply and what its magnitude should be.

This chapter discusses policies on paying for services provided by different specialists. It is assumed that each specialist can provide a service at an adequate level of quality. If not, the specialist should be discouraged from providing the service. Mechanisms for discouraging a physician from providing a service include peer review through the hospital medical staff and Peer Review Organizations, other physicians' desire to refer their patients to physicians who provide good care, the risk of malpractice litigation, and professional ethics. The Commission prefers that physicians be prevented from providing services of substandard quality rather rather than that such activities be discouraged through lower fees.

Principles

Several conclusions follow from principles for reform delineated by the Commission in its first report and summarized in chapter 1. First, it would be inequitable and illogical to pay one physician more than another for the same service, and such a differential would provide inappropriate incentives for physicians to specialize. Evidence of a difference in the service by specialty should be required to consider a differential. Second, a fee schedule should be no more complex than necessary. Paying different fees to different specialists would complicate the fee schedule. Specialty differentials should be used only if necessary to achieve specific objectives.

A policy for specialty differentials should be consistent with the principles on which the relative value scale and fee schedule are based. The Commission is recommending that the primary basis for relative values under the fee schedule be the resource costs of providing services and that adjustments be made when necessary to ensure access to services (chapter 3). Similarly, if services differ among specialists, a specialty differential could be based on differences in resource costs.[5] A specialty differential could also be provided if necessary to ensure access to specialized services.

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[5] One justification for setting relative values according to resource costs in the RVS is to avoid giving physicians an incentive to provide one service instead of another. Similarly, specialty differentials set to account for differences in costs, including the costs of acquiring specialized skills, would give physicians more neutral incentives to train for one specialty relative to another.

In a relative value scale based on resource costs, the relative value or fee for a service is composed of elements to compensate for the overhead cost and the implicit cost of the physician's time and effort. Similarly, one might pay specialty differentials to account for differences in either overhead or in the work that different physicians put into a service. The discussion in this report focuses only on specialty differentials to account for differences in the physician's work net of overhead.[6] Future work will consider appropriate ways to assign overhead costs among services.

Which Services Are Different?

A number of services are provided by more than one kind of specialist. Most physicians provide visits and consultations. Both general surgeons and family practitioners provide relatively simple surgical procedures such as herniorrhaphies and appendectomies. Both gynecologists and urologists perform certain surgical procedures on the female urinary tract. Lacerations are repaired by plastic surgeons, general surgeons, emergency physicians, and family practitioners. And physicians of many different specialties perform simple procedures such as EKGs, chest radiographs, and sigmoidoscopies.

A visit, a consultation, or a surgical or technical procedure could differ from physician to physician because different specialists have different approaches to care or because they generally provide the service to different kinds of patients. If these differences result in differences in average resource cost or work for a procedure, then a difference in the relative value would appear to be consistent with an RVS based on resource costs. In many instances, however, the differences in resource costs could be accounted for by different codes rather than by specialty differentials.

Visits and Consultations. Different specialists approach evaluation of a patient differently; these differences are reflected in the content of visits (Greenwald, 1984; Greenwald et al., 1984; Mendenhall et al., 1984; chapter 5 of this report). There is evidence suggesting that the content and resource costs of visits and consultations differ among specialists, even for the same procedure code. An office visit of a given level of complexity (for example, brief, limited, or intermediate) appears to involve more time and effort on average for an internist than for a family practitioner, and consultations by surgeons differ in content and resource costs from those by internists (Mendenhall, 1984). In each instance, the differences among specialists reflect different approaches to their work. An internist may be more likely to perform an extensive history and a complete physical examination for patients than a surgeon or a family practitioner, who are more likely to focus on the patient's chief complaint. These differences do not imply that one approach is better than the other; there is little information available on the relative effectiveness of different approach. Each approach may be the best one for the problems that each type of physician usually encounters.

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[6] Overhead varies among specialists as a fraction of gross practice revenue because of different costs for space, personnel, equipment, and malpractice premiums. Overhead may not differ for a particular service provided by different specialists. For instance, a cardiologist may have higher practice overhead than an emergency physician, but the overhead attributable to the interpretation of an EKG in the emergency room may not differ. The proper allocation of overhead expenses to different services remains to be addressed by the Commission.

The differences in work among specialists for the same visit code could be recognized through differences in payment, either through specialty differentials or through the use of different codes. Of course, if the differences among specialists in the content and work of their visits or consultations were shown to represent inefficiency and to provide no benefit to the patient then they should not be recognized.

Surgery and Technical Procedures. The content of a surgical or technical procedure may also differ by specialty, either from differences in approach or because of differences in the average complexity of the problems of the patients they see. A plastic surgeon might repair a particular laceration differently from an emergency physician or general surgeon. The lacerations repaired by a plastic surgeon may be more likely to be large, to be on areas that are visible, and to require more complex techniques to repair them.

However, these differences may not result in differences in work for the same service. Furthermore, many of the differences in procedures by specialty are accounted for through distinctions available in coding. The coding for repair of lacerations differentiates by size and location of the laceration and the method of closure. If there are substantial differences in the content or work of a surgical or technical procedure when performed by different specialists, such differences are, or could be, captured through different procedure codes.

By definition, those services provided by only one specialist, such as cataract surgery, do not differ by specialty. However, a method of setting relative values on the basis of resource costs of the physician's work would be expected to account for the specialized knowledge, skill, experience, and judgment required for the procedure.

Unless substantial differences are demonstrated and cannot be recognized through additional coding distinctions, specialty differentials would not appear to be needed to reward the special expertise used in surgery and technical procedures.

Efficiency and Outcome. Differences in payment for a procedure should be considered only for differences in costs of specialists when both provide a service efficiently. In principle, differences in payment should be provided for differences in work only if they lead to differences in outcome--if not, the increased work represents inefficiency. If one specialist takes longer and requires more effort to provide a service only because he is less efficient--more time and effort is expended with no difference in outcome--this specialist's increased work does not merit higher payment. Unfortunately, differences in outcome are difficult to measure and have seldom been studied. Efficiency can be determined only if the outcome can be measured.

The effectiveness of many medical practices and procedures has not been demonstrated (Institute of Medicine, 1985; Wennberg, 1985, 1987; Eddy, 1984). As more information on effectiveness becomes available, it should be used to refine payment practices. More importantly, it should lead to changes in

physicians' practices.[7] The effectiveness and efficiency of different approaches to care are not likely to be determined in the near future. In the interim it may be appropriate to recognize differences in work by differences in payment, as is done for other services.

Different Codes or Specialty Differentials? Where differences in services are to be recognized, it would be better to do so through the coding system rather than with specialty differentials. First, different codes can capture the actual differences in the work performed; codes for repair of lacerations, for example, specify the location, size, and method of repair. As noted, most differences for surgery and procedures are now captured by the coding system. Second, a physician's specialty may be a poor indicator or proxy for differences in services. Many of the differences are differences on average: physicians of one specialty may have longer consultations on average than physicians of another, but there is also variation among physicians of each specialty. An individual physician may have longer or shorter consultations than the average for his or her specialty.

The use of a poor indicator would be inequitable both within and among specialties. If specialty is a poor indicator of length of consultation, a specialty differential would inappropriately reward physicians whose consultations were shorter than average for their specialty, or even shorter than the average of another specialty. It is preferable to provide compensation for the additional work to those physicians who actually do it rather than to all physicians of a specialty as a proxy for average differences in work. The inequity associated with a poor proxy may outweigh the advantages of accommodating average differences in resource costs.

Some differences in services may not be easily captured by different codes. As discussed in chapter 5, the current coding system may not now define visits in such a way that the differences among visits and consultations of different specialists are reliably captured. The Commission is examining two ways to improve the specificity of coding for these services (chapter 5). First, the use of current codes might be standardized through better definitions and instructions for using them. Alternatively, new visit codes might be developed. If differences for visits and consultations cannot be accounted for by using different codes, then specialty differentials are an alternative. However, if specialty differentials are to be used as a proxy for these differences, the differences in services should be highly correlated with the physician's specialty and be explained by differences in the approaches of different specialists and systematic differences in work.

Specialty Differentials to Ensure Access

The fees paid for specialized services are intended to ensure access for Medicare beneficiaries. If relative values and specialty differentials based on

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[7] This discussion applies not only to differences among specialists, but to medical services generally. A service demonstrated to be generally ineffective should not be covered. Most services are effective for some patients or medical problems and not others; they should be used only in those instances for which they are effective. In the absense of knowledge about the effectiveness of services, the presumption has been that services provided or prescribed by physicians are effective and should be paid for unless specifically considered to be inappropriate. As knowledge of effectiveness increases, payment could gradually be restricted to those services and uses that are known to be effective.

differences in resource costs do not ensure access to specialized services, they could be increased in an attempt to do so.[8]

A specialty differential might be needed to ensure access in the short term or long term. In the short term, Medicare may have to pay fees competitive with those offered by other payers. Of course, other payers may change what they pay when Medicare adopts a fee schedule. Medicare should design and implement a fee schedule based only on resource cost, monitor access to care, and make adjustments to ensure access only if needed.

In the long term the pool of physicians with specialized expertise must be maintained at a level adequate for the needs of the population. Since physicians incur some of the financial costs of that training, they may not choose to undertake specialized training in adequate numbers unless they receive some financial return on that investment.[9] To ensure long-term access, Medicare and other payers might have to provide compensation for the costs of training or for the value of specialized skill and judgment acquired through training.

However, this compensation may not require specialty differentials. As noted, most surgery and technical procedures are done by one or a few specialties. A relative value scale based on resource costs would already include the value of skill and judgment. Further, if physicians' decisions to specialize are based primarily on nonfinancial factors, financial compensation for all of the costs of specialized training may not be needed to ensure access to specialized services--and may not work. If there will be a growing surplus of specialists, as projected by the Graduate Medical Education National Advisory Committee, an additional financial incentive to specialize would seem inappropriate (Tarlov, 1983).

Some may argue that a specialty differential is needed for all services provided by a specialist, not just those that differ among specialists in content and cost, to compensate physicians for the costs of specialized training and ensure access to specialized services. As just discussed, it is not clear that any compensation would be required. In any event, paying specialists more to do all services would also reward them when they provide services outside their areas of special competence.

Magnitude of Specialty Differentials

The Commission is recommending that relative values for the Medicare fee schedule be based primarily on the resource costs of services. To be consistent with this, a specialty differential, if it were to be used, would be based on

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[8] By similar reasoning, fees for services in excess supply might be reduced to the level just necessary to ensure access.

[9] Relatively small increases in fees would be required to amortize the costs of additional training over the expected working life of a physician, perhaps 1 or 2 percent for each additional year of training. Thus the fee for a specialty with five years of required training would be only 2 to 4 percent higher than that for a specialty with three years, and the difference would apply only to selected services.

differences in resource costs when different specialists provide services under the same procedure code.[10]

WHO IS A SPECIALIST?

If Medicare were to pay specialty differentials, it would need a nationally uniform method to designate physicians as specialists.[11] Medicare now allows each carrier to designate physicians as specialists; the criteria vary from self-designation by physicians to board certification.

For equity and simplicity of administration of a national program, the criteria for designating a physician as a specialist should be uniform throughout the United States. The criteria must be easy to apply and validate and should reliably indicate the specialized skill and judgment expected of a specialist. Self-designation clearly does not meet these requirements.

The Commission will examine approaches using criteria that are combinations of board certification, specialty training, and demonstration of acceptance by peers as a specialist. Each approach would use criteria already developed in the private sector.

Board Certification

The simplest criterion for designating physicians as specialists is board certification. It is accepted by physicians as an indication of competence, it would provide uniform national criteria for designating a specialist for Medicare, and it could be monitored and validated through published sources.[12]

The board certification processes of the twenty-three specialty boards recognized by the American Board of Medical Specialties (ABMS) generally require that candidates possess an unrestricted license to practice medicine in the United States, have successfully completed residency or other formal

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[10] The method of Hsiao et al. (1987) counts the opportunity costs of specialty training as resource costs of a service. However, if the knowledge and skill gained through the specialized training are already counted in each relative value, it would seem to be redundant also to count the opportunity costs of training.

[11] The designation of specialist applies only to the basis for paying specialty differentials, not to determine which physicians could perform or be paid for specialized services. As noted earlier, other means are better suited to determine which physicians should be allowed to perform a procedure: the granting of hospital privileges, threat of sanctions by peer review organizations for poor quality care, the risk of malpractice, informed choice of physicians by beneficiaries, and referral decisions of other physicians.

[12] For example, the McMillan Directory Division publishes a *Directory of Medical Specialists*. The American Board of Medical Specialists publishes the *ABMS Compendium of Certified Medical Specialists*, and *Compendium Supplement*, as well as specialty biographical directories for each of twenty-four specialty societies.

training, and have passed written and oral examinations. The twenty-three boards issue certificates in thirty-one specialties and fifty subspecialties. Doctors of Osteopathy can become certified through the American Osteopathic Association (AOA) and may become certified in the allopathic specialties by the specialty boards recognized by the ABMS.[13]

About seventy other boards are not recognized by the ABMS or AOA. The qualifications required for certification by these boards vary. The criteria considered here are based on certification by boards recognized by the ABMS or AOA.

Board Certification of Physicians. Most physicians designate themselves as specialists. According to the Physician Masterfile of the American Medical Association, in 1985 57 percent of all active physicians, excluding residents in training, were board certified.[14]

The proportion of physicians who are board certified varies by declared specialty. Of those who declared internal medicine as their primary area of activity, 59 percent were board certified. For other specialties, 72 percent of family practitioners were certified, 54 percent of psychiatrists, 66 percent of general surgeons, 79 percent of orthopedists, 76 percent of urologists, 80 percent of ophthalmologists, 76 percent of thoracic surgeons, 88 percent of radiologists, 51 percent of anesthesiologists, and 84 percent of pathologists.[15]

Board certification is recognized as a valid indication of competence and would be easy to administer. However, board certification may be too restrictive, since it would exclude some physicians that many would recognize as legitimate specialists.[16] Physicians who are not board certified include several groups that might be designated as specialists by other criteria:

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[13] Fifteen boards now issue time-limited certificates and require diplomates to recertify after a designated period of time. Requirements for recertification and the length of time that certificates are valid vary by specialty.

[14] The data for the percentage of physicians who declare a specialty and who are board certified are from the Physician Masterfile of the American Medical Association as summarized in Tables B-8 and B-12 of *Physician Characteristics and Distribution in the U.S.* (American Medical Association, 1986). For each specialty and for all physicians together, the number of physicians certified by a board recognized by the American Board of Medical Specialties was divided by the number of physicians (excluding residents in training) who declared that specialty as their primary area of activity when surveyed by the AMA. Declaration of primary area of activity may not correspond to the specialty a physician would declare to a Medicare carrier for purposes of payment. The data do not include osteopathic physicians, and the Commission does not have comparable numbers for those physicians.

[15] These figures count only certification by a board corresponding with the declared primary area of practice. There is no certifying board for general practice, but 14 percent of physicians specifying general practice as their primary activity were certified by some specialty board.

[16] The increased economic significance of board certification might also increase the potential that those controlling the criteria could change the requirements for certification to restrict further entry into the specialty.

- Physicians who are still in residency training, those doing fellowship training, and those who have completed professional training but have not yet satisfied additional requirements for board certification.[17] Some will not have taken certification exams, and some will have failed them. Some of these physicians have hospital privileges to practice in the specialty for which they have trained.

- Physicians who have not had formal training but have acquired the skills of specialists and have established themselves as specialists in the eyes of their peers as signified by hospital privileges in the specialty.[18]

Evidence of Specialty Training or Peer-Attested Competence

Medicare could allow specialty training or competence as attested by peers as an alternative to board certification. Either criterion would be less restrictive than board certification and might increase the access of Medicare beneficiaries to specialized care.

The specification of training required for specialist designation would probably be straightforward, perhaps using the level of training included in the requirements for qualifying for the corresponding specialty board.[19] Documentation of completion of the required training would have to be collected and verified. Boards certifying specialists now require that such documentation be presented to them by those applying to take board examinations. A similar process might be used by Medicare.

Peer-attested competence would be more difficult to define and to administer. The definition or criteria might be based on evidence of current hospital privileges to practice within the specialty. However, hospitals do not usually grant privileges to practice a specialty; they grant more specific privileges, such as the privilege to admit patients for certain types of care or to perform certain procedures. It is not clear how peer-attested competence could be defined for specialty designation.

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[17] Some boards require that a physician practice one or more years before taking board exams. Also, most board examinations are offered either once each year or every other year, so that even those who take and pass the first exam for which they are eligible cannot become certified until six or eighteen months after completing training.

[18] Some specialty boards have allowed physicians without formal training in the specialty to sit for the boards and become certified if they pass. For instance, the boards for both family practice and emergency medicine allowed physicians without formal specialty training to take examinations within a specified number of years after the boards were established. Completion of formal training in the specialty is now required to sit for the examination.

[19] In the past the term board eligibility was often used to mean qualified to sit for the certification examination of a specialty board. Because of the changing nature of requirements qualifying candidates for admission to the certification process, the member specialty boards of the American Board of Medical Specialties no longer use board eligibility as a classification. The criterion considered here is specialty training itself.

Verification of credentials under the alternative of peer-attested competence would be more difficult than under required training or board certification. Although various resources maintaining biographical data about individual physicians exist, no one reference point is available to verify credentials other than board certification.[20] The burden of providing evidence of hospital privileges might be placed on the individual physician seeking specialty designation. Verification of these privileges would have to be done case by case annually by the carriers. This process could be time consuming and expensive.

Requiring both evidence of training and peer-attested competence would exclude physicians who had not completed training or had not yet been granted hospital privileges. Requiring either training or competence would exclude the fewest physicians. It would, however, exclude physicians who are not board certified physicians and who have neither completed specialty training nor hold current hospital privileges to provide specialty care.[21]

Each of the proposed alternatives is more restrictive than the current policy of most carriers. Under each, some physicians who had been self-designated as specialists might receive a lower fee for some services than those recognized as specialists by Medicare. Beneficiaries' access to the services of these physicians could be reduced, especially if other payers used a less restrictive policy.[22] However, we do not know the effects of reduced access to the services of those no longer designated as specialists.

A transition policy could be established for physicians already practicing who do not meet the new requirements. For instance, if board certification were to be required, Medicare could allow physicians with specialty training or competence or both to be designated specialists for a limited time. After that time they would be designated as specialists only if they had become board certified. Alternatively, all physicians providing evidence of training or competence as of a fixed date could be permanently designated as specialists. New physicians beginning to practice after the deadline would have to become board certified to be designated specialists.

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[20] Medical societies might have current data on their membership that could be made available to HCFA. However, not all physicians are members of specialty societies.

[21] One might allow training as a qualification for specialist designation only until the physician has had an opportunity to pass the qualifying examinations. Otherwise, those who choose not to take the exam or fail it remain indefinitely designated as specialists.

[22] If the payment differentials applied only to visits, the impact could be potentially less serious, since payment for other procedures would depend only on physicians' having any privileges required to perform the procedure.

CONCLUSION

The Commission's thinking on specialty differentials is still developing. Though it is not ready to issue recommendations for specialty differentials under a fee schedule, the outlines of a policy are emerging:

- Specialty differentials would not be needed for most services. Differences in work for surgery and procedures when performed by different specialists are already recognized by current codes. To account for differences in work by specialty for visits and consultations, definitions of existing codes could be improved and their use standardized, or a new set of codes might be developed. If this is not feasible, a specialty differential could be used as a proxy for differences in work associated with specialty.

- A specialty differential would be considered only if the content and work for a service differ among specialists. If a specialty differential were used, it would recognize differences in resource costs by different specialists for the same procedure code.

- The policy should be uniform nationally.

- Medicare should use valid, verifiable, and nationally uniform criteria for designation as a specialist. Possibilities include board certificiation, specified levels of specialized training, and perhaps evidence of peer-attested competence.

As the Commission considers this issue further, it will continue to consult with all interested parties, particularly specialty societies and beneficiary groups.

CHAPTER 7 GEOGRAPHIC MULTIPLIERS

Under the current system of determining Medicare payment for physicians, geographic variation in approved charges reflects the pattern of charges submitted by physicians. If the physicians in one area submit charges that are higher than average for a service, the Medicare approved charge in the area will automatically be higher than average (chapter 8 presents data on current patterns of geographic variation).[1] A fee schedule affords the opportunity to specify a pattern of variation that reflects such policy goals as improving access to care by beneficiaries and increasing equity among physicians.

As part of the fee schedule, geographic multipliers must be developed that will determine how payment for each service is to vary from one area to another. Thus if the judgment is made that payments for upper GI endoscopy should be 10 percent higher than the national average in a particular area, a multiplier of 1.10 would be specified.

This chapter discusses how geographic multipliers should be developed and how the boundaries between geographic areas should be drawn. It begins with a discussion of alternative conceptual approaches and then discusses the use of a cost-of-practice index. Finally, adjustments for factors unique to rural areas are considered.

CONCEPTUAL APPROACHES

The development of geographic multipliers could follow either of two distinct approaches. One alternative would use market data to set the multipliers. Starting at either the current relative payments or relative payments based on a cost-of-practice index, data on beneficiary access to care in each locality would be periodically collected and geographic multipliers revised, so that localities with relatively good access would have their multipliers reduced, and those with relatively poor access would have their multipliers increased. The goal would be to equalize access to care by beneficiaries regardless of location.

Whether this approach would be practical is not clear and, in any case, would require substantial development work. Measures of access and methods of collecting the required data would have to be developed. Under current policies regarding assignment, data on charges in excess of approved amounts would be a possible indicator of access (see the discussion in chapter 3 on the problems with using assignment rates). If Medicare limited actual charges more than under current policies, however, detecting differences in access would be far more difficult and would involve extensive surveying of beneficiaries.

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[1] An important qualification to this relationship concerns the effects of constraints from the Medicare Economic Index and the fee freeze of 1984-86. If physicians in a given area raised their charges to a greater extent than the national average increase, these constraints would have retarded the degree to which the geographic patterns of payments by Medicare responded.

The alternative approach would have geographic multipliers represent "just" prices, or reflect notions of variations in payment levels that are fair. One concept of fairness would simulate the pattern of geographic variation that a hypothetical perfect market would yield. Under a perfect market, geographic variation would reflect variations in costs of practice and differences in earnings sufficient to compensate physicians for the advantages of one location over another. A different concept of fairness would permit no variation in payments or only enough variation to offset differences in overhead costs among areas.

Whether an approach oriented to the market or one addressed to fairness is to be pursued would depend on one's assessment concerning the strength of market forces in the allocation and pricing of physicians' services. To the extent that market forces are strong, unevenness in access to care could result from attempts to develop a fair pattern of payments (unless the prices were based on an accurate simulation of the hypothetical market). To the extent that they are weak, a pattern that is viewed as fair might be preferred.

Since approaches to geographic variation that attempt to be fair are clearly feasible and most frequently discussed, most of this chapter is devoted to them. Nevertheless, the Commission plans further examination of the market approach as well.

COST-OF-PRACTICE INDEX

A cost-of-practice index is likely to be a major component of geographic multipliers in a fee schedule. Unless Medicare payments are set in accordance with variations in the cost of practice, they could discourage physicians from practicing in areas with high costs. They would also be unfair to physicians who continued to practice in those areas and to beneficiaries who would face extra charges or restricted access to care.

Congress has mandated the Secretary of Health and Human Services to develop a cost-of-practice index. The Commission anticipates that the Secretary's report will assist in developing recommendations for geographic multipliers. The staff has been granted access to materials developed by contractors to support the Secretary's report and is optimistic about the technical feasibility of developing such an index.

The Commission anticipates making detailed recommendations on the form of the index once it has reviewed the Secretary's report, but the direction of its thinking and the identification of the major decisions to be made are already clear.

What Is a Cost-of-Practice Index?

A cost-of-practice index attempts to summarize variations in the prices of resources employed in a medical practice. It uses data on prices rather than expenditures. Thus data on office rents would measure the rental price per square foot rather than the total rent paid by a medical practice, which would reflect the quantity and quality of space in addition to its unit price.

In attempting to measure prices, those creating indexes try to avoid using data on the prices actually paid. Physicians often face a range of prices for a given input and the price paid reflects their choice of quality as well as the market that they face. For example, in leasing office space, physicians deciding to locate in a new building in a prime location would tend to pay higher rents than others. To better reflect the prices physicians face, a representative measure of prices in the market, such as the average rent per square foot of commercial office space, is used.

Since an index includes the prices for a number of inputs, weights are required to combine them. In most indexes that are practical to measure, the weights reflect national data on the proportion of expenditures that go for the various inputs, such as the fraction of costs that go for office rent.[2] These data are obtained through surveys of physicians. Multiplying each of the price measures in an area by the associated national proportion of expenditures (the weight) gives an index of practice costs in an area.

The components of a cost-of-practice index are of two types--those purchased by physicians and the physician's own input. The major items that are purchased--usually referred to as overhead--include office space, salaries of nonphysician employees, professional liability insurance, medical equipment, medical supplies, and professional automobiles. Prices for the first three items vary significantly by geographic area; the other three have relatively uniform prices nationally. Overhead components account for roughly half the weights in a cost-of-practice index.

Physician Input

Since either as individuals or as partners most physicians own their practices, their efforts are compensated not by salary but by the difference between gross revenues and expenses. Thus there are no market prices for physician input, and alternative methods must be devised if it is to be included in a cost-of-practice index.[3]

A component for physician input should reflect differences in valuation in different geographic areas. Many think of an area's cost of living as an appropriate guide, but the Commission finds two serious deficiencies with it.

First, cost of living does not conform to the concept of resource costs that the Commission has chosen as the primary basis for its fee schedule. Under a resource-cost basis, the physician input component would reflect differences in what physicians would have to earn in different areas for them to feel equally well off. In other words, geographic differences in the valuation should be set to compensate for preferences that physicians have for one location over another. But cost of living is only one factor that determines such preferences.

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[2] Technically, this is called a Laspeyres price index.

[3] Some physicians are salaried, but their earnings would not be a suitable basis for the physician input component of the index. Their salaries are influenced heavily by the net incomes of self-employed physicians; thus any distortions in the geographic pattern of payments are likely to be reflected in geographic patterns of salaries of employed physicians.

Other factors--climate, amount of crime, access to recreation and culture, employment opportunities for spouses, and interaction with other physicians--are important as well. Thus if physicians feel equally well off practicing in Honolulu for 20 percent lower fees than they would get in Detroit, the physician input component should be valued 20 percent less in Honolulu, even if the cost of living is higher.

While these preferences cannot be measured directly, economists have measured the degree to which earnings levels are adjusted by the market to compensate for preferences for one location over another. Recent studies have demonstrated the importance of factors such as air pollution, crime rates, climate, and proximity to the ocean in explaining geographic variation in earnings in a number of nonmedical professions (Kenny, 1987).

One cannot use physician earnings to develop a price proxy because of an inherent circularity. The rationale for a fee schedule's use of geographic multipliers based mostly on an index of costs of practice is an assessment that the current pattern of geographic variation is distorted. To use physician earnings in the index would tend to ensure that the pattern of geographic variation in charges would not change.

The concept could be pursued, however, by using data on the earnings of others whose locational preferences might be similar to those of physicians. Occupations with substantial educational requirements and with high earnings--mostly professional occupations--might be the most relevant. To the degree that earnings of nonphysician professionals are determined by markets more competitive than the medical services market, their geographic pattern of earnings could be used as a proxy for how physicians' earnings would vary if the market for their services were more competitive.

An argument could be made, however, for use of earnings data from a much broader occupational mix. For example, the Medicare Economic Index uses earnings of all nonagricultural workers as a proxy for the physician input. A broader measure would have the advantage of larger sample sizes and avoiding what some would characterize as an elitist tone.

A fee schedule based on resource costs would then look to the model of compensating wage differentials to determine the physician input component of a cost-of-practice index. The geographic pattern of earnings of other occupations could be used as a proxy for what the geographic pattern for physicians would be in a more perfectly functioning market. On a conceptual basis, using an earnings proxy appears to be preferred to using a cost-of-living index.

Practical considerations are also relevant to choosing a measure to reflect variation in "prices" for the physician input. Problems exist for both cost-of-living proxies and earnings proxies. While the Bureau of Labor Statistics (BLS) has extensive measurements of changes in the cost of living over time (the consumer price index), it no longer measures variation in the cost-of-living among areas. The BLS Family Budgets series was discontinued in 1981, in part because of serious technical limitations. Even then it covered only a limited

number of metropolitan areas and no rural areas. The private sources that the Commission is aware of also have serious technical problems and little coverage of rural areas.[4]

Earnings data are available from a number of sources, the most prominent of which is a 20 percent sample file of the 1980 Census. Two limitations seem most serious, especially if earnings data are limited to those for professionals. One concerns standardizing for the ability of professionals. If some areas attract the best and the brightest of a profession, the pattern of earnings will reflect this situation as well as the differences in pay that an individual professional would encounter. This problem could be ameliorated to some extent by narrow specification of professional categories and the exclusion of categories that appear to be particularly subject to this problem.[5]

A broader earnings measure would not be subject so greatly to such an ability bias. However, an adjustment for occupational mix would be essential, so that differences in the mix of blue-collar workers and professionals among areas would not be confounded with differences in earnings for those in a particular category. Another advantage of a broader earnings measure would be that sample sizes in the smaller metropolitan areas would not be as much of a problem.

The second problem in the use of earnings measures is the age of the data. Earnings data from the 1980 Census are for 1979. The data could be updated, however, through the annual Current Population Survey (CPS). While the CPS sample is not large enough to replicate the detail in the Census, it could be used to update the earnings in each geographic area for much broader categories of workers. Of course, data from the 1990 Census will become available at the approximate time a fee schedule might be implemented.

As the Commission continues to assess alternative methods to develop the physician input component of a cost-of-practice index, it will also consider the option of an index that reflects only variation in overhead costs. Such an index would value physician input the same in all areas of the country. The index would not be consistent with a concept of fairness based on resource costs, but some feel it would be more consistent with other federal policies dealing with geographic variation. The individual income tax, for example, uses the same progressive rate schedule in all areas, despite differences in earnings levels and the cost of living. This means those living in areas where the earnings and the cost of living are higher pay a higher proportion of their income in taxes. Similarly, the Medicare Part B premium is uniform nationally.[6]

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[4] The work done for the Health Care Financing Administration by the Urban Institute and the Center for Health Economics Research reviews in detail the available sources and their limitations. This report has not yet been released to the public, however.

[5] For example, natural scientists with Ph.D.s could be separated from those with masters degrees so that one area's employment of a higher proportion of doctoral-level scientists is not confounded with pure differences in salary levels.

[6] While Social Security payments are not adjusted for costs of living, they are based on individual earnings histories, which reflect geographic patterns in earnings.

The Commission plans to continue discussion of these issues, and looks forward to hearing additional views of physicians, beneficiaries, and others.

Specialty-Specific Indexes

It is feasible to develop cost-of-practice indexes that are specific to each specialty. With one important exception--professional liability insurance--physicians of different specialties face the same input prices. They have different spending patterns, however, with different proportions of their expenditures going for office rent, nonphysician employees, and especially liability insurance premiums. Thus a specialty-specific index involves applying a different set of weights for each specialty to uniform components for all input prices except professional liability insurance, for which different premiums are faced by different specialties.[7]

Having a specialty-specific index is likely to be fairer to physicians (and, by inference, to beneficiaries as well). The drawback appears to be the additional administrative complexity. The Commission will investigate both the magnitude of differences that such indexes would make and the additional administrative workload required before making a recommendation on this issue.

From comments received from physicians, the Commission understands that variations in premiums for professional liability insurance are a key concern. It plans to consider ways that a cost-of-practice index might reflect these variations in as refined a manner as is feasible. Even if a specialty-specific index is not used, the overhead component of such any index will reflect geographic variation in the premiums for professional liability coverage.

Rural Adjustments

Given its special concerns about access to care for beneficiaries living in rural areas, the Commission will pay particular attention to whether the cost-of-practice index adequately captures the monetary and nonmonetary costs associated with providing physicians' services in these areas.

On the one hand, some costs for services in rural areas are not completely represented by indexes of input prices. Through additional data collection and research, adjustments to a price index can be developed. On the other hand, there are nonmonetary costs that are difficult to quantify, such as being on call at all times. This issue cannot be resolved with better data; further work is needed to develop an analytic framework that would identify the variables of interest.

Improving the Input Price Index. Some of the additional costs of rural practice derive from higher input prices that are not reflected in the cost-of-practice index. Maintenance of equipment, for example, tends to be more expensive because of the additional travel time for technicians and because of delays in

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[7] Even here, the degree of variation from one geographic area to another tends to be similar for each specialty. If the premium in an area for a specialty is three times the average for all physicians, that ratio will tend to hold in other geographic areas as well.

obtaining service. Medical equipment is not included in the cost-of-practice index because purchase prices are relatively uniform nationally.[8]

Other costs reflect not prices, but the need for additional inputs to practice in isolated areas. Additional diagnostic equipment may be required where independent laboratories or hospitals are not accessible. To the degree that this equipment is underused, an additional cost is borne by the rural physician.

The Commission has attempted to find data to analyze the magnitude of these differences in costs, but such information at the level of detail required is not available. For now, it has attempted a rough estimate of an upper bound for these additional costs. First, all inputs that are included in the cost-of-practice index have been excluded from consideration. Analysis of American Medical Association data on practice costs shows that 86 percent of gross revenues (overhead costs and net income) can be accounted for by items that are included in the cost-of-practice adjustments. Since gross revenues in 1985 averaged $215,500, the items not explicitly adjusted for amounted to only $30,000. However, if one assumes that medical supply and equipment costs do not vary among geographic areas,[9] another $16,000 of total physician practice costs are accounted for, leaving only $14,000 of other nonspecified costs for which there is no information.[10] Even if all of these unspecified costs varied significantly and consistently by location (for example, if rural expenses were one-third higher), the total additional unaccounted-for costs of rural practice would be less than $5,000.

Taking another approach, the inputs identified here as being likely to involve unaccounted-for cost differences are transportation costs, equipment maintenance, and the purchase of diagnostic equipment that is underused. Given that annual medical equipment expenses average only $6,000 a year, neither equipment maintenance nor standby capacity costs would amount to more than a few thousand dollars.

This preliminary examination of the likely magnitude of the excess financial costs of practice not captured by the price index indicates that the costs are not large. However, the Commission will continue to examine new data as they become available and will work toward a better understanding of practice cost variation.

Accounting for Nonmonetary Costs. Nonmonetary costs of rural practice include such intangibles as distance from cultural activities and the unique difficulties of rural practice. Lifestyle differences not specific to medical practice could be controlled for by including an earnings proxy for physicians' time and effort in

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[8] Group or volume purchase discounts are probably more important than geographic variation. While there is a higher proportion of solo practitioners in rural areas, the Commission has no data on whether they participate in purchasing groups.

[9] This is a reasonable assumption, given that many of these items are marketed nationally and can be obtained by mail order.

[10] Other expenses are thought to include transportation costs, office supplies, medical education expenses, and perhaps maintenance expenses.

the cost-of-practice index. The earnings of nonphysicians tend to be determined in markets that operate more efficiently than the health care market, and thus more accurately account for differences in locational preferences.

However, the difficulties of rural medical practice, particularly the need to be on call at virtually all times, are unique to physicians and are not encompassed by an index based on the earnings of others. Indeed, this is one of the challenges of rural practice often mentioned by physicians themselves. The role of sole community provider is unique, and probably involves a certain amount of responsibility and stress. Quantifying this cost presents a difficult problem: data are unavailable, and a model for analysis needs to be developed to determine what data to collect. The Commission will attempt to obtain more information to determine if this is a significant factor, how it might be studied, and how it might be incorporated into the cost-of-practice index.

The Commission feels that physician payment policies should be consistent with and supportive of other policies promoting rural health and physician distribution. Therefore, it is actively working toward the development and refinement of a cost-of-practice index to determine geographic variation in payment under a fee schedule. Even after steps are taken to rationalize the variation in payment between urban and rural areas, however, it is likely that rural areas will continue to experience difficulty in recruiting and retaining medical personnel. While the problems of rural health care delivery must be addressed, increasing fees for rural practice and reimbursement policy in general can only go so far. Other policy tools, such as the National Health Service Corps and Rural Health Clinics, will be needed and may ultimately be more important in addressing rural health needs.

LOCALITY BOUNDARIES

Under the current payment system, locality boundaries do not reflect any consistent policy. Drawing the boundaries has traditionally been left to each carrier. In some cases localities are entire states; in others each metropolitan area in a state is a locality and the rural areas are grouped into another locality. Some carriers divide states into regions, each of which includes a metropolitan area and surrounding rural districts. One carrier follows congressional district boundaries. Implementation of a fee schedule presents an opportunity to decide which types of locality boundaries make the most sense and to apply the policy consistently across the country.

Setting locality boundaries involves a number of conflicting goals. First, the localities should be homogeneous with respect to costs of practice. Since one purpose of a fee schedule is to have payments vary geographically according to differences in the costs of practice, lack of homogeneity within a locality would work to prevent realization of this goal.

Second, locality boundaries should be drawn so as to avoid sharp differences in payment rates on different sides of the boundary unless costs of practice are also sharply different. Sharp differences may stimulate physicians to move across the boundaries.

Third, the boundaries must be administrable. Discussions with carriers indicate that the key constraint is that the boundaries coincide with postal code boundaries. This is not terribly restrictive, since county and metropolitan statistical area (MSA) boundaries do conform to postal code boundaries. Another aspect of administrability concerns data availability. While five-digit zip codes might be the most homogeneous, little of the data required to develop a cost-of-practice index is available for areas that small. Most of it tends to be available on a county or MSA basis.

The Commission will be examining different alternatives for locality boundaries over the next year. It expects to recommend a uniform method to establish locality boundaries throughout the nation.

CONCLUSIONS

- Under a fee schedule, payments should vary geographically in accordance with variation in physicians' costs of practice.

- A geographic cost-of-practice index is feasible to construct. The issues that are most difficult, and will get most attention from the Commission over the next year, concern how to construct the component of the index that reflects the physician's own time and effort. The options range from using a measure of earnings of nonphysicians to having the cost-of-practice index reflect variations in prices for overhead items only.

- An adjustment should be made to reflect factors unique to rural practice that are not accounted for in the cost-of-practice index.

- A uniform policy is required to set locality boundaries for use in a fee schedule. Localities should be homogeneous with respect to costs of practice, should avoid sharp differences in geographic multipliers between adjacent localities, and be administrable.

CHAPTER 8 GEOGRAPHIC VARIATION IN MEDICARE CHARGES

Under Medicare's customary, prevailing, and reasonable (CPR) method of determining payments to physicians, the nation is divided into approximately 240 charge localities. In each locality the Medicare carrier computes a prevailing charge for each procedure code (often separately for each relevant specialty), following a standard algorithm.

Periodically, evidence is published showing that prevailing charges (and approved charges) vary extensively from one locality to another.[1] Three- and fourfold differences in charges for particular procedures are common (Office of Technology Assessment, 1986; Burney, et al., 1978; Schieber et al., 1976). Even within a state, prevailing charges vary substantially from one locality to another. Using crude proxies, studies have concluded that regional differences in cost of practice do not explain all of the variation in charges (Burney, et al. 1978).

Extensive geographic variation in Medicare charges is a key policy concern of the Commission. Wide variation in charges unrelated to differences in cost of practice could mean access to care and beneficiary financial protection might be compromised in areas where prevailing charges are low. Inequities among physicians practicing in different areas are also a concern, especially in the current environment of severe budgetary constraints, where payment updates have been much lower than increases in physicians' cost of practice.

Reflecting the priority that the Commission has given this issue, its staff has analyzed geographic variation in prevailing charges for 1987. The analysis differs from previous work in several ways. First, it uses national data bases, permitting both a national scope and integration of information on local charges and frequencies of services. Second, it adjusts charges for geographic differences in costs of practice. Third, it classifies localities along several dimensions, thereby facilitating analysis of variation in charges among urban and rural areas.

The chapter begins with a description of the pattern of geographic variation in prevailing charges.[2] It proceeds to analyze the pattern of geographic variation

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[1] The prevailing charge is the 75th percentile of customary charges in a locality, subject to the limitation that the charge can exceed its level in fee screen year 1973 only by the amount reflected in the Medicare Economic Index (MEI). The approved charge is the lowest of either the submitted charge, the customary charge, or the prevailing charge. Some submitted charges are now limited by Maximum Allowable Actual Charges (MAACs). Some studies have used approved charges, while others have used prevailing charges. It is likely that for most services, the correlation across localities of approved charges and prevailing charges is very high.

[2] Prevailing charges are preferred over approved charges as a unit of analysis because they are the policy variable that Medicare controls. Since prevailing charges are screens, approved charges are either the same as prevailing charges or lower.

in charges that have been deflated by a cost of practice index, and then discusses policy options and the Commission's recommendations. An appendix describes the cost-of-practice adjustment used in the analysis and a future adjustment for variation in definitions of global fees for surgery.

VARIATION IN PREVAILING CHARGES[3]

Data analyzed include prevailing charges for office and hospital visits, consultations, diagnostic procedures, and surgical procedures (see table 8-1).[4] Complementing the analysis of single procedures is an analysis of geographic variation in two composite variables: an index of prevailing charges for initial office visits, and a multiservices index of prevailing charges for the 110 procedures in the *1984 Medicare Directory of Prevailing Charges*.[5]

Analysis is restricted to prevailing charges for the specialty most likely to perform each procedure: internal medicine (IM), family practice (FP), gastroenterology (GE), orthopedic surgery (OS), thoracic surgery (TS), general surgery (GS), urology (UR), and ophthalmology (OP). When comparing charges among urban and rural areas, analysis is restricted to the procedures likely to be performed frequently in both types of areas.

Extent of Variation

The geographic variation in prevailing charges is substantial, but not as extensive as many had expected (see table 8-1). For example, 5 percent of internists' comprehensive hospital visits to new patients were provided in localities where the prevailing charge was less than $55; 95 percent of the

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[3] The calendar year 1987 prevailing charges analyzed in the chapter are from a special HCFA survey of carriers; the service frequencies used as weights in some analyses are from the 1985 Medicare Part B Annual Data System's Procedure file, BMAD1.

The Commission is grateful to HCFA for providing BMAD system data files. It is also grateful to HCFA for authorizing its policy center at Brandeis University to release data from the carrier survey, and to the staff at Brandeis for creating data tapes under time pressures.

[4] The set of procedures analyzed was limited to those included in HCFA's special survey of carriers. Among the important Medicare procedures not in the HCFA survey were office visits by established patients and cataract surgery. PPRC staff estimated 1987 average approved charges for those two procedures from 1985 BMAD1 data, inflated by net increases in reasonable charges reported in the *1987 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund*, and used the estimates in place of prevailing charges in the analyses.

[5] The office visit index is the weighted mean of prevailing charges in a locality for the following visits: 90000, brief; 90010, limited; 90015, intermediate; 90017, extended; and 90020, comprehensive. The prevailing charges were weighted by national frequencies from the 1985 BMAD1 files. An index for hospital visits was not calculated because two-thirds of hospital visits for new patients fell in a single category--comprehensive (90220). The multiservices index was developed by Peter McMenamin as part of a project for HCFA. The Commission is grateful to HCFA for providing access to this work.

visits were provided in localities where the prevailing charge was less than $124. Furthermore, 50 percent of the visits were delivered in localities where the prevailing charge was between $78 and $105. This variation is less extensive than might be inferred from the fourfold difference between the minimum of $40 and the maximum of $160--the type of information most readily available in the past.[6]

Table 8-1: Distribution of Locality Prevailing Charges for Selected Procedures and Specialities, Weighted by Frequency of Service, 1987

HCPCS	Procedure Name	Spec.	Mean (dollars)	PERCENTILES 5	25	50	75	95
90020	Office Visit, Comprehensive	IM	81	55	67	78	90	111
		FP	64	30	45	60	83	111
	Office Visit Index	IM	61	40	50	58	67	91
90050	Office Visit, Limited	IM	24	16	21	22	28	33
		FP	20	13	16	18	22	32
90220	Hospital Care, Comprehensive	IM	91	55	78	89	105	124
		FP	78	55	60	78	90	111
90250	Hospital Care, Limited	IM	26	17	22	26	28	36
90620	Consultation, Comprehensive	IM	104	78	89	105	111	150
93000	EKG, Complete	IM	38	30	33	39	44	45
71020	Chest X-Ray	IM	41	33	36	40	44	56
43235	Upper GI Endoscopy	GE	343	254	293	330	363	542
27130	Total Hip Replacement	OS	2694	1923	2238	2662	3105	3549
33512	Coronary Artery Bypass	TS	4385	3092	3678	4434	5000	5919
47600	Gallbladder Removal	GS	922	721	776	887	1043	1350
52601	Prostatectomy (TUR)	UR	1270	887	998	1109	1349	1774
66983	Cataract Removal	OP	1689	1390	1522	1624	1827	2122
	Multiservice Index		101	79	88	97	110	135

Sources: 1987 HCFA Survey of Carriers (prevailing charges), 1985 BMAD I Procedure File (frequency weights).

[6] Since all localities did not have usable data, the range between the minimum and the maximum could in fact be even larger.

Among different services, charges for visits tend to vary more than charges for surgical procedures, which in turn tend to vary more than charges for diagnostic procedures. For a comprehensive hospital visit, the prevailing charge at the 95th percentile of services was 125 percent greater than the prevailing charge at the 5th percentile. Charges at the same percentile points on the distribution of internists' comprehensive office visits with new patients differed by 102 percent; the difference between values on the visit index distribution was somewhat larger, 128 percent. For prostatectomy the difference was 100 percent, and for an EKG it was only 50 percent. The 71 percent difference for the multiservice index came toward the low end of the range. Finally, prevailing charges by family practitioners for office and hospital visits varied more than charges by internists for the same nominal procedure.

Table 8-2 presents the same information expressed as the percent of services delivered in areas where prevailing charges fall within specified ranges around national means. These data reinforce the previous finding that prevailing charges for visits vary more than do charges for other services and procedures. For example, 54 percent of limited office visits to internists were delivered in areas with prevailing charges between 80 and 120 percent of their national means; 66 percent of comprehensive hospital visits by internists, 69 percent of prostatectomies and 89 percent of EKGs were delivered in localities with prevailing charges in that range.[7]

The relationships between service distributions and the two charge indexes are consistent with the relationships that hold for individual procedures.[8] Only 66 percent of initial office visits are delivered in localities where charge index values are within 20 percent of their national mean; 80 percent of Medicare services are delivered in localities where the multiservices charge indexes are within 20 percent of their national mean.[9]

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[7] Why geographic variation in charges for visits is greater than variation in charges for other procedures will be a key question to answer in future analysis. One hypothesis is that because visits have traditionally been less heavily insured than other services, factors such as area income affect what physicians could charge for visits more than they affect charges for other services.

[8] Results from a companion analysis of an unweighted index of prevailing charges for office visits are not reported because the results of that analysis were similar to results for the weighted version. The rationale for examining the unweighted index is possible carrier-by-carrier differences in the use and interpretation of visit codes. If those differences are extensive among areas, the unweighted index might be preferable to the weighted version. Also examined but not reported are results from analysis of geographic variation in prevailing charges for a package of three services commonly performed by internists: limited office visit (90050), complete EKG (93000), and chest X-ray (71020). The variation in the sum of prevailing charges for the three services was similar to variation in prevailing charges for the EKG alone.

[9] The indexes are weighted by locality population over 65 years of age, not by frequency of service; the analysis assumes that population is a reasonable proxy for frequency of Medicare services. An alternative interpretation of the reported result is that 80 percent of the elderly population resides in localities where the value of the multiservices index is within 20 percent of the national mean.

Finally, the shapes of the distributions--whether they are skewed in the direction of higher charges--differ from procedure to procedure. For some, such as gallbladder removal, the fraction of services performed in areas with prevailing charges 20 percent or more above the national means exceeded the fraction performed in areas with charges 20 percent or more below the means. For other services, including office and hospital visits to family practitioners, the opposite pattern held.

Table 8-2: Percent of Services in Localities Where Prevailing Charge is Within Specified Range Relative to U.S. Mean, 1987

HCPCS	Procedure Name	Spec.	Mean (dollars)	-- Range --		
				below 80	80-120	above 120
90020	Office Visit, Comprehensive	IM	81	21	59	20
		FP	64	31	39	30
	Office Visit Index	IM	61	17	66	17
90050	Office Visit, Limited	IM	24	23	54	23
		FP	20	33	49	18
90220	Hospital Care, Comprehensive	IM	91	14	66	21
		FP	78	28	57	16
90250	Hospital Care, Limited	IM	26	20	59	20
90620	Consultation, Comprehensive	IM	104	11	76	13
93000	EKG, Complete	IM	38	7	89	4
71020	Chest X-Ray	IM	41	2	86	12
43235	Upper GI Endoscopy	GE	343	15	73	13
27130	Total Hip Replacement	OS	2694	16	64	19
33512	Coronary Artery Bypass	TH	4385	18	62	20
47600	Gallbladder Removal	GS	922	7	70	23
52601	Prostatectomy (TUR)	UR	1207	11	69	19
66983	Cataract Removal	OP	1689	3	87	10
	Multiservice Index		101	6	80	12

Sources: 1987 HCFA Prevailing Charge Data File (prevailing charges),
1985 BMAD I Procedure File (approved charges and frequency weights).

Variation among Procedures

If the prevailing charge in a locality for one procedure is 30 percent greater than the national mean, what does that imply about the charge for a different procedure in that locality? It implies less than many would have anticipated; that inference is drawn from analysis of pairwise correlations between prevailing charges for a set of representative services (see table 8-3).[10]

The correlation coefficients are smaller than might have been anticipated, in some cases surprisingly so. The square of the correlation coefficient between charges for hospital visits by internists and charges for upper GI endoscopies implies that variation in charges for one service explains only 8 percent of the variation in charges for the other.[11] Conversely, only a few correlations are large enough (0.70 or greater) that variation in charges for one procedure explains half or more of the variation in charges for the other.

Correlations vary widely in size and are largest among charges for visits, consultations, and EKGs; somewhat smaller among charges for visits and surgical procedures; and smallest among charges for the diagnostic and other procedures. That pattern suggests that high or low charges in a locality for one service are not universally predictive of equally high or low charges for another.

These results imply that policies to reduce geographic variations in charges are likely to have different effects on the physicians that practice in a given area. In an area with relatively high charges, not all physicians would be affected to a substantial degree by a ceiling. This possibility might diffuse political opposition to options to reduce geographic variation.

Levels of Charges and Approval Rates

Given the rules of Medicare's CPR system before 1975, geographic variation in prevailing charges simply reflected variations in charges submitted by physicians. It may still largely reflect that, but after a long period of constraint by the Medicare Economic Index, it is possible that prevailing and approved charges in areas where they are low might be held further below submitted levels than is the case in areas where they are high.

That possibility was investigated by analyzing correlations between approval rates (ratios of approved to submitted charges) and the corresponding mean

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[10] Correlation coefficients measure the linear association between two variables; coefficients range between -1.0 and +1.0 in value. A correlation of 0 indicates no linear relationship; a coefficient of 1.0 indicates a perfectly linear relationship. The larger the absolute value of the correlation coefficient, the closer will the the plot of the two variables in question resemble a straight line; the plot would slope upward to the right if the correlation were positive and downward if it were negative (see Blalock, 1972, chapter 17).

[11] The square of the correlation coefficient, in this case 0.29 * 0.29 = 0.08, is interpretable as the proportion of the variation in prevailing charges for one service that is explained by the variation in prevailing charges for the other (see Blalock, 1972, p. 392).

Table 8-3: Correlation Coefficients Among Locality Prevailing Charges, 1987 (unweighted)

HCPCS	Procedure	Spec.	90020 IM	90050 IM	90220 IM	90620 IM	93000 IM	71010 IM	43235 GE	47600 GS	66983 OP
90020	Office Visit, Comprehensive	IM	1.00	0.52	0.76	0.67	0.59	0.35	0.30	0.38	0.49
90050	Office Visit, Limited	IM		1.00	0.49	0.60	0.62	0.63	0.49	0.50	0.56
90220	Hospital Care, Comprehensive	IM			1.00	0.73	0.57	0.36	0.29	0.39	0.47
90620	Consultation Comprehensive	IM				1.00	0.56	0.40	0.32	0.57	0.56
93000	EKG, Complete	IM					1.00	0.45	0.48	0.50	0.62
71020	Chest X-Ray	IM						1.00	0.47	0.32	0.39
43235	Upper GI Endoscopy	GE							1.00	0.41	0.39
47600	Gallbladder Removal	GS								1.00	0.54
66983	Cataract Removal	OP									1.00

Source: 1987 HCFA Survey of Carriers
1985 BMAD I Procedure File

approved charges for each procedure in each locality (table 8-4). All the correlation coefficients were positive, and eleven of sixteen were significantly different from zero. This finding is consistent with the hypothesis that payments in areas with low approved charges are constrained to a greater extent by Medicare prevailing charge screens than payments in areas with high charges. However, further investigation of this hypothesis is required before firm conclusions can be drawn.

Urban-Rural Differences

Although charges are generally higher in urban areas than in rural areas, the differences often are modest. That inference is drawn from comparisons of prevailing charges in urban and rural counties. The charges are derived from

Table 8-4: Correlation Coefficients Between Mean Approved Charge and Approval Rates, 1985 (Unweighted)

HCPCS	Procedure Name	Spec.	Correlation Coefficient
90020	Office Visit, Comprehensive	IM	0.27
90020	Office Visit, Comprehensive	FP	0.08
90050	Office Visit, Limited	IM	0.42
90050	Office Visit, Limited	FP	0.55
90220	Hospital Care, Comprehensive	IM	0.20
90220	Hospital Care, Comprehensive	FP	0.24
90250	Hospital Care, Limited	IM	0.47
90620	Consultation, Comprehensive	IM	0.12
93000	EKG, Complete	IM	0.08
71020	Chest X-Ray	IM	0.27
43235	Upper GI Endoscopy	GE	0.23
27130	Total Hip Replacement	OS	0.23
33512	Coronary Artery Bypass	TS	0.38
47600	Gallbladder Removal	GS	0.09
52601	Prostatectomy (TUR)	UR	0.23
66983	Cataract Removal	OP	0.04

Source: 1985 BMAD I Procedure File

prevailing charges in the corresponding carrier localities.[12] Counties within metropolitan statistical areas (MSAs) are classified as urban and those outside MSAs are rural. Urban counties are classified further as constituents of large or small MSAs; rural counties are classified as large or small in population.[13]

[12] Some localities are clusters of counties; each county was assigned the prevailing charges of that locality. In other cases, when counties cross locality boundaries, county prevailing charges were defined as the weighted average of prevailing charges in the relevant localities, using as weights the fraction of the county's population in each locality. Los Angeles County is a cluster of localities; there, county prevailing charges are defined to be frequency-weighted means of prevailing charges from the constituent localities.

[13] MSAs with populations of 1,000,000 or greater in 1980 are designated large. Rural counties with populations of 10,000 or greater in 1980 are designated large.

In general, prevailing charges are highest in large urban areas and lowest in small rural areas. Average prevailing charges over all counties are very close to the average charges in small urban areas (table 8-5).[14] For a comprehensive hospital visit by an internist, prevailing charges in large urban areas average 19 percent higher than in small rural areas. The large urban-small rural difference is 31 percent for a gall bladder removal and 18 percent for an EKG. For the multiservice index the difference is 33 percent.

Grouping counties into four categories reduced variation among areas relatively little. In many cases, coefficients of variation (cv) of prevailing charges within categories were not appreciably smaller than those for the entire nation.[15] Implicitly, the variation in prevailing charges among urban and rural counties is often as great or greater than that between urban and rural areas.

VARIATION IN CHARGES AFTER ADJUSTMENT FOR COST OF PRACTICE

This section covers geographic variations in prevailing charges that have been adjusted for cost of practice. The appendix to this chapter describes the adjustment index used and work in progress to develop a comparable adjustment for the degree of bundling of global fees for surgery.

Variation in Prevailing Charges

Adjusting prevailing charges for geographic differences in cost of practice reduces geographic variation in those charges but only somewhat. This assertion follows from comparing the data in table 8-6 with analogues in table 8-2. The proportion of services delivered in areas where prevailing charges are within 20 percent of the national mean often increases only slightly following adjustment for cost of practice. For comprehensive hospital visits by internists, the proportion increases from 66 to 76 percent, for prostatectomy from 69 percent to 81 percent, and for EKGs and chest X-rays it is virtually unchanged.

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[14] The means reported in each category are computed from prevailing charges in the constituent counties weighted by each county's 1980 population 65 years of age and older. National means computed from county data differ somewhat from means computed from locality data because of different weighting variables (elderly population in the former, frequency of services in the latter) and incomplete data on prevailing charges for some counties that cross locality borders.

[15] The coefficient of variation (cv) for a given distribution is defined as the standard deviation divided by the mean multiplied by 100. The statistic summarizes the variability in prevailing charges across counties within each group; the greater the cv the greater the variation. Different analysts employ different threshold cv levels when judging the degree of dispersion in distributions of physicians' fees. For example, Schieber et al. (1976) defined fee distributions as concentrated around their means if cvs were 50 or less. Others, however, have used tighter standards based on the observation that cvs of prices for new cars and for certain homogeneous commodities priced in competitive markets are less than 10 (Newhouse and Sloan, 1972).

Table 8-5: Mean Prevailing Charges for Selected Procedures in Urban and Rural Counties, by Size Category, 1987

HCPCS	Procedure Name	Spec.	Large Urban (c.v.)	Small Urban (c.v.)	Large Rural (c.v.)	Small Rural (c.v.)	All Counties (c.v.)
90020	Office Visit, Comprehensive	IM	83 (26)	76 (20)	69 (22)	68 (21)	77 (25)
		FP	72 (31)	63 (31)	55 (34)	53 (34)	64 (34)
	Office Visit Index	IM	69 (22)	60 (23)	51 (21)	51 (21)	61 (25)
90050	Office Visit, Limited	IM	26 (22)	22 (19)	20 (18)	18 (18)	23 (24)
		FP	24 (28)	21 (22)	19 (21)	18 (18)	21 (27)
90220	Hospital Care, Comprehensive	IM	94 (22)	88 (15)	80 (16)	79 (19)	88 (20)
		FP	84 (24)	81 (21)	75 (21)	71 (24)	80 (23)
90250	Hospital Care, Limited	IM	29 (21)	23 (21)	21 (19)	20 (20)	25 (25)
90620	Consultation, Comprehensive	IM	116 (16)	98 (18)	89 (15)	85 (16)	102 (20)
93000	EKG, Complete	IM	39 (14)	36 (15)	34 (12)	33 (15)	36 (16)
71020	Chest X-Ray	IM	44 (18)	39 (15)	37 (12)	37 (19)	40 (18)
43235	Upper GI Endoscopy	GE	361 (25)	327 (18)	313 (16)	285 (18)	335 (22)
47600	Gallbladder Removal	GS	1042 (20)	893 (20)	810 (13)	794 (9)	920 (21)
66983	Cataract Removal	OP	1867 (17)	1593 (12)	1521 (11)	1563 (11)	1681 (17)
	Multiservice Index		114 (15)	97 (12)	90 (10)	86 (9)	101 (17)

Source: 1987 HCFA Survey of Carriers (prevailing charges), 1987 Area Resources File (population weights).

Table 8-6: Percent of Services in Localities Where Prevailing Charge Is Within Specified Range Relative to U.S. Mean, 1987 (Deflated)

HCPCS	Procedure Name	Spec.	Mean (dollars)	-- Range -- below 80%	80-120%	above 120%
90020	Office Visit, Comprehensive	IM	79	22	63	15
		FP	64	32	40	27
	Office Visit Index	IM	60	21	64	18
90050	Office Visit, Limited	IM	24	14	79	8
		FP	20	24	54	22
90220	Hospital Care, Comprehensive	IM	90	12	76	12
		FP	80	23	61	16
90250	Hospital Care, Limited	IM	25	17	72	10
90620	Consultation Comprehensive	IM	102	2	86	11
93000	EKG, Complete	IM	38	2	86	12
71020	Chest X-Ray	IM	41	8	86	5
43235	Upper GI Endoscopy	GE	343	16	77	7
27130	Total Hip Replacement	OS	2676	14	67	18
33512	Coronary Artery Bypass	TS	4332	11	75	13
47600	Gallbladder Removal	GS	932	6	77	16
52601	Prostatectomy (TUR)	UR	1201	6	81	12
66983	Cataract removal	OP	1743	4	88	9
	Multiservice Index		101	0	98	3

Sources: 1987 HCFA Survey of Carriers (prevailing charges),
1985 BMAD I Procedure File (frequency weights),
HCFA Office of Research (preliminary data on cost of practice).

After adjusting for cost of practice, a substantial proportion of services continue to have prevailing charges more than 20 percent higher or lower than the national mean. Like the unadjusted prevailing charges, this proportion is highest for visits and lowest for diagnostic procedures. Other differences among individual procedures and between specialties remain essentially the same after adjustment for cost of practice.

Implicitly, then, geographic differences in cost of practice explain only some of the geographic variation in prevailing charges.

Urban-Rural Differences

Since costs of practice are higher in urban areas than in rural areas, deflating prevailing charges by a cost of practice index narrows the spread (table 8-7). Differences in average prevailing charges among the four categories of counties are then quite small. For some procedures, adjusted charges in rural areas are as high or slightly higher than adjusted charges in urban areas.

Most of the remaining urban-rural variation in prevailing charges is attributable to the spread between adjusted charges in the largest urban areas and rural areas. The multiservice index indicates that overall, charges in large urban areas are 6 percent higher than in small rural areas, compared with a 33 percent difference before adjustment. Furthermore, the value of the adjusted multiservice index is essentially the same in small urban areas and large rural areas.

Thus much of the difference in charges between urban and rural areas is explained by differences in costs of practice. To the extent that cost of practice is being measured correctly, the results cast doubt on the existence of major inequities between urban areas and rural areas in the aggregate. Substantial geographic inequities do exist, but they lie more in the differences among specific urban or rural localities.

INTERIM POLICY OPTIONS

This analysis documents substantial geographic variation in prevailing charges, especially for visit services. Cost of practice explains much of the variation between urban and rural areas in the aggregate, but only a small portion of the variation from one locality to another. Therefore, Congress must consider how much of the remaining geographic variation is appropriate and what steps should be taken to reduce the inappropriate residual, perhaps prior to implementation of a fee schedule.

Congress needs to consider whether factors besides cost of practice are legitimate bases for geographic variation and, if so, how much variation in charges should be permitted. For example, supply and demand imbalances might justify variations in prevailing charges, with higher charges being allowed in some areas to redress local shortages of physicians.

Measuring supply and demand imbalances is difficult, however. Studies have tended to use physician-to-population ratios as proxies, but such measures are crude. For example, they are seldom adjusted for differences in medical needs of the local population and do not account for patients crossing geographic borders to obtain treatment by specialists.

Table 8-7: Mean Prevailing Charges for Selected Procedures in Urban and Rural Counties, by Size Category, 1987 (Deflated)

HCPCS	Procedure Name	Spec.	Large Urban Mean (c.v.)	Small Urban Mean (c.v.)	Large Rural Mean (c.v.)	Small Rural Mean (c.v.)	All Counties Mean (c.v.)
90020	Office Visit, Comprehensive	IM	76 (25)	79 (21)	76 (22)	77 (21)	77 (23)
		FP	65 (28)	65 (29)	61 (33)	60 (33)	63 (30)
	Office Visit Index Wt	IM	63 (19)	61 (22)	57 (20)	58 (21)	61 (20)
90050	Office Visit, Limited	IM	24 (20)	23 (18)	22 (18)	21 (17)	23 (19)
		FP	22 (24)	21 (22)	21 (20)	20 (18)	21 (23)
90220	Hospital Care, Comprehensive	IM	87 (23)	90 (15)	90 (16)	89 (19)	89 (18)
		FP	77 (22)	83 (19)	83 (20)	80 (23)	80 (21)
90250	Hospital Care, Limited	IM	27 (16)	24 (20)	23 (19)	23 (20)	25 (19)
90620	Consultation, Comprehensive	IM	106 (13)	100 (17)	99 (15)	96 (15)	102 (15)
93000	EKG, Complete	IM	36 (13)	37 (14)	38 (12)	37 (14)	37 (13)
71020	Chest X-Ray	IM	40 (18)	40 (15)	41 (15)	42 (19)	41 (16)
43235	Upper GI Endoscopy	GE	338 (22)	334 (19)	347 (15)	321 (17)	339 (19)
47600	Gallbladder Removal	GE	966 (17)	922 (20)	907 (13)	899 (9)	933 (17)
56983	Cataract Removal	OP	1718 (14)	1628 (12)	1701 (12)	1776 (12)	1685 (15)
	Multiservice Index		104 (11)	99 (12)	100 (10)	98 (8)	101 (11)

Source: 1987 HCFA Prevailing Charges Data File

In the near term the possibility of legitimate factors in addition to cost of practice, and measurement error in the cost of practice indexes, are reasons to emphasize policies that do not entirely eliminate the geographic variation that appears inappropriate, but instead limit its range. The remainder of this chapter assesses a basic option of placing upper and lower bounds on the range of prevailing charges for each service, and a variant of that option.

Under these options, prevailing charges for all procedures would be adjusted for cost of practice differences. For those procedures currently paid on the basis of a bundled fee, an additional adjustment would be made for the degree of bundling in each carrier's area (see the appendix to this chapter). Then a national mean prevailing charge would be calculated. Adjusted prevailing charges would be limited by lower and upper bounds, such as 80 percent and 120 percent of the national mean prevailing charge.[16]

This proposal would increase equity among physicians and tend to increase access to care in areas with low prevailing charge screens by increasing the relative attractiveness of those areas to physicians who are choosing a practice location. Without simultaneous changes in Medicare assignment policy, the effect on beneficiary out-of-pocket costs would vary depending on individual circumstances. In localities with increases in prevailing charges, coinsurance would be higher but balance billing lower. The reverse would occur in localities where prevailing charges decreased. The prevailing charges for a given service in the majority of localities would not be affected.

The proposal has some significant disadvantages, however. It would change some prevailing charges in directions opposite to that under a fee schedule. For example, an office visit in an area with high prevailing charges might not be reduced under a fee schedule, since the change in relative values could outweigh the geographic change. Or an overvalued procedure could have its charge increased in areas with relatively low prevailing charges.

A second disadvantage is that reductions in prevailing charges in a few areas could be substantial. Preliminary analysis of setting floors and ceilings at 80 percent and 120 percent of national mean prevailing charges suggests that for most procedures, only a small proportion of services would face prevailing charge reductions, and most of the reductions would be small (table 8-8). However, for some procedures, a limited number of areas would experience prevailing charge reductions in excess of 25 percent.

Some might consider these reductions large enough that major policy decisions would have to be made concerning limits on extra billing. In contrast to the policy on overvalued procedures, which placed charge limits on those services for which prevailing charges were reduced, a geographic policy with a ceiling could affect prevailing charges for a substantial number of different services in some localities.

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[16] If the goal is to develop a proposal that has no net budget impact, the upper bound must be further from the mean than the lower bound. While distribution of services appears to have little skew, the distribution of charges has a pronounced one. Thus a policy that establishes bounds at 80 and 120 percent of the national mean would on balance reduce aggregate payments to physicians.

Table 8-8: Percent of Services Affected by Floor and Ceiling on Deflated Prevailing Charges, 1987

HCPCS	Procedure Name	Spec.	CHANGE IN LOCALITY PREVAILING CHARGE: Change in Locality Prevailing Charge: Percent Reduction > 25	Percent Reduction 15-25	Percent Reduction 5-15	Percent Reduction 0-5	No Change 0	Percent Increase 0-5	Percent Increase 5-15	Percent Increase 15-25	Percent Increase > 25
90020	Office Visit, Comprehensive	IM	0	5	6	4	63	1	9	3	9
		FP	1	18	7	2	40	9	9	5	8
90050	Office Vistit, Limited	IM	3	0	4	0	78	1	10	3	1
		FP	0	1	15	5	54	8	12	1	4
90220	Hospital Care, Comprehensive	IM	0	1	8	2	76	2	1	1	8
		FP	0	4	2	11	61	11	6	1	4
90250	Hospital Care, Limited	IM	3	1	4	3	72	8	4	3	2
90620	Consultation, Comprehensive	IM	0	0	9	2	86	2	1	0	0
93000	EKG, Complete	IM	0	0	5	7	87	1	0	0	1
71010	Chest X-Ray	IM	0	0	2	4	86	3	6	0	0
43235	Upper GI Endoscopy	GE	3	0	2	2	77	7	5	1	2
45378	Diagnostic Colonoscopy	GE	0	0	1	6	82	6	3	2	0
27130	Total Hip Replacement	OS	0	1	5	13	67	8	5	0	1
33512	Coronary Artery Bypass	TS	0	0	6	7	75	3	6	1	2
47600	Gallbladder Removal	GS	0	5	6	6	78	3	0	0	3
52601	Prostatectomy (TUR)	UR	0	0	7	6	81	3	4	0	0
66983	Cataract Removal	OP	0	0	4	5	88	3	1	0	0

Source: 1987 HCFA Survey of Carriers (prevailing charges),
1985 BMAD I Procedure File (Services),
HCFA Office of Research (preliminary data on cost of practice).

A companion simulation of the 80 percent floor and 120 percent ceiling on prevailing charges conducted for the Commission by the Congressional Budget Office (CBO) found different effects on Medicare approved charges across geographic regions (table 8-9). Compared to an average reduction in allowed amounts of 0.9 percent, the option would decrease allowed amounts in the Northeast by 2.5 percent but increase them by 2.4 percent in the North Central

region.[17] Urban allowed amounts would decrease by 1.2 percent while rural amounts would increase by 1.0 percent.

Table 8-9: Simulated Percent Changes in Approved Charges When Floors and Ceilings are Applied to Prevailing Charges, By Region, Fiscal Year 1989

Location	Floor and Ceiling Relative to National Means: 80 percent floor-120 percent ceiling; (all procedures)	80 percent floor; (primary care only)
All	- 0.9	0.3
Northeast	- 2.5	0.1
North Central	2.4	0.7
South	- 1.0	0.2
West	- 1.5	0.1
Urban	- 1.2	0.2
Rural	1.0	0.7

Source: Preliminary estimates produced by Congressional Budget Office

An alternative proposal that is less ambitious but avoids these two problems would place a floor under prevailing charges for primary care services only.[18] This more limited proposal offers the opportunity for progress on the Commission's major goals relating to geographic variation in charges. It would increase payments in low charge areas for those services most associated with access to care. It would not risk policy discontinuities and would leave major policy decisions regarding extra billing to be addressed in the context of the fee schedule. The proposal would be consistent with the Commission's previous recommendations to protect primary care services from budget cuts by providing payment increments for primary care services in underserved areas.

The increases in prevailing charges for primary care services in some localities would be substantial (see table 8-8). For example, with a floor of 80 percent of the national mean, the prevailing charge for a comprehensive office visit by an internist would increase more than 15 percent in areas responsible for 12 percent of those services.

[17] While time constraints precluded incorporating a regional dimension to the analysis of urban-rural differences in prevailing charges, these simulation results suggest that regional inequities are present.

[18] Primary care services include office visits, nursing home visits, home visits, and emergency department visits.

The financial effects on beneficiaries would be varied. In those localities affected, coinsurance would increase but the differences between submitted charges and the Medicare approved charge would decrease. Since primary care services tend to have relatively low assignment rates (see chapter 9), beneficiaries could have reduced out-of-pocket costs in the aggregate.[19]

The CBO simulation model provides a distributional analysis of the option (table 8-9). Rural areas would gain more than urban areas--an effect consistent with congressional concerns about improving access for Medicare beneficiaries in those areas. The North Central region would gain more than other regions.[20]

This proposal would increase outlays by Medicare. For an 80 percent floor for primary care services Medicare payments for physician services would increase by approximately 0.3 percent (see table 8-9). Without assumptions about induced changes in the use of services, this translates into an additional $70 million a year 1989.[21] A lower floor would reduce the cost substantially. Enactment of such a floor in the current budgetary environment would likely require reductions in other areas. A ceiling applied to services other than primary care would be one possibility, but other options are available as well.

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[19] At least 40 percent of claims for primary care services are unassigned (see data in chapter 9 on assignment rates by specialty). If the prevailing charge were increased by $1.00, those beneficiaries with extra bills would pay $0.80 less per claim ($1.00 less in extra bills offset by $0.20 in additional coinsurance). Those beneficiaries whose claims are assigned would pay $0.20 more in coinsurance. For the average beneficiary the net effect of a $1.00 increase in prevailing charges (from a floor) would be a $0.20 reduction in out-of-pocket costs. To the degree that Medigap policies pay coinsurance but not extra bills, and some of the Medigap premiums are paid by someone else (for example, a retiree health plan), the reduction in out-of-pocket costs for the average beneficiary would be higher. On the other hand, any induced increases in submitted charges by physicians not accepting assignment would reduce the savings in out-of-pocket costs.

[20] Implementation of any geographic policy would require additional efforts on the part of HCFA to standardize carrier policies with regard to coding and specialty definition. The need to move in this direction in any case is clear from the broad interest in a fee schedule as well as the requirements to implement the provisions on overpriced procedures in the Omnibus Budget Reconciliation Act of 1987.

[21] This estimate is for a full year of operation and reflects incurred rather than paid claims. The first-year costs of such a proposal would be much lower after the start of the fiscal year because of lags in claims submission and processing, and other factors.

RECOMMENDATION: The Commission recommends setting floors on the prevailing charges for primary care services (after adjustment for costs of practice) at a fixed percentage of the national mean prevailing charge for the service.

CONCLUSIONS

- Substantial variation in prevailing charges exists among the approximately 240 charge localities.
- Adjustment for costs of practice reduces the variation among localities somewhat, but most remains after adjustment.
- Prevailing charges are higher in urban than in rural localities. Adjustment for costs of practice reduces the aggregate urban-rural difference substantially. After adjustment, charges in urban areas are only slightly higher than those in rural areas.
- The Commission recommends a floor on prevailing charges for primary care services.

APPENDIX 8

DEFLATING FOR COST OF PRACTICE AND BUNDLING

This appendix describes the preliminary cost of practice adjuster used in this chapter and the bundling deflators not yet constructed but contemplated for any policy changes affecting the geographic pattern of payment and implemented before a fee schedule.

COST OF PRACTICE DEFLATORS

Chapter 7 discussed how cost of practice indexes can be developed and the key conceptual and technical decisions that are required. At this point, the Commission has not developed comprehensive recommendations on the preferred index to be used in a fee schedule. Nevertheless, its thinking on this topic has progressed sufficiently to allow its staff to employ a preliminary index for use in analyzing patterns of geographic variation.[1] While this preliminary index is too crude for setting payment rates or estimating the impact of changes on particular geographic areas, it appears to be sufficiently accurate to analyze general patterns of geographic variation and broad impacts of various policy options.

The index used is structurally similar to the Medicare Economic Index (MEI). The MEI measures changes over time in the prices faced by physicians for seven components: physician's input, nonphysician employee wages, office rent, professional liability insurance, medical supplies, medical equipment, and other (includes professional automobiles).[2] Of the seven components, only the first four show extensive geographic variation. The prices of medical supplies, medical equipment, and automobiles tend to vary little across the nation. Thus a geographic version of the MEI requires only four components.[3]

Developing index components for employee wages, office rent, and professional liability insurance involves, for the most part, finding the best available data. The decisions are not always straightforward, because they often involve making trade-offs between accuracy of the data and closeness to the construct being measured. For example, data on residential rents may be more accurate than data on office rents. The index used in this report relied on the best available data but should be considered preliminary and likely will be improved in the future.[4]

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[1] The Commission acknowledges the efforts by HCFA to develop cost of practice indexes, and appreciates HCFA's providing access to draft reports of its contractors and the data that they have developed.

[2] The price of the physician's input is based on a broad index of weekly earnings in nonfarm employment adjusted for trends in labor productivity.

[3] Chapter 7 described in general terms how a geographic cost of practice index is developed.

[4] Office rents in the index are estimated by fair market rent for a uniform size apartment published by the U.S. Department of Housing and Urban Development.

Specifying physicians' net income, which accounts for more than half of the weight in the index, is the most important and difficult decision in constructing the index. Chapter 7 argued that if the net income component is to have geographic variation, the best proxy is census data on either earnings of professionals or earnings of all nonfarm employees. The former was used for this analysis.

While a professional earnings series can be created from the 20 percent sample of the 1980 census, only a series from the 1 percent sample is available for preliminary work.[5] This smaller sample has a number of limitations. One is that the sample of professionals in some of the smaller MSA's is limited; consequently, sampling error could be substantial. This is a problem only if the results of the analyses are used improperly--that is, if attention is focused on the results for a specific small MSA rather than on broad patterns. Tabulations from the 20 percent sample will be available to implement any policy changes based on a cost-of-practice index.

Another limitation is that the category of professionals is very broad. It might be appropriate to narrow the focus to professionals most similar to physicians in income and education, and adjust for differences in the mix of professionals in different geographic areas. While these steps can be taken with the larger census sample, there is concern that the smaller sample could bias estimates of earnings for rural areas downward. To deal with this distortion in the 1 percent sample, the earnings data for nonmetropolitan counties were truncated so that the higher of the actual value and the average for the smallest category of MSAs was used.

The indexes employed in this analysis are specialty-undifferentiated. As discussed in chapter 7, the Commission believes specialty-specific indexes might be preferred for a fee schedule. Nevertheless, use of a specialty-undifferentiated index is unlikely to have distorted the analyses of this chapter.[6]

Much of the data underlying the cost-of-practice index are available by county, by MSA, or by state. Virtually no data are available by carrier charge locality. Constructing indexes at the locality level required development of algorithms for mapping data from reporting areas to charge localities. For some analyses, reverse mappings were required--from charge localities to counties. The mapping processes were straightforward in some cases and required detailed judgment in others.[7]

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[5] HCFA has requested a special tabulation from the Bureau of the Census from the 20 percent sample. While published data are available from the 20 percent sample, they are too incomplete to be used in this analysis.

[6] The distorting effects of a specialty-specific index occur for specialties without the overhead of an office and for those with the highest premiums for professional liability insurance. This analysis does not include any procedures done in the hospital by hospital-based physicians. With regard to professional liability insurance, most of the data are from 1985, a year when premiums were only 4 to 5 percent of the average physician's revenues. Thus the absence of specialty-specific variation in the index used is unlikely to have a major impact on the broad conclusions of this analysis.

[7] Details on the mappings are available from the PPRC staff.

BUNDLING DEFLATORS

Surgical procedures are normally paid on the basis of a global fee and generally include perioperative procedures and postoperative visits. Chapter 4 described how the extent of services bundled into the global fee varies from carrier to carrier. It also outlined the Commission's plans to standardize definitions of global fees for use in a fee schedule.

If policies to alter the geographic pattern of charges are implemented before a fee schedule, it would be advisable to adjust for variations in bundling policies across carriers. Consider the following hypothetical example. Carrier A's global fee for a coronary artery bypass graft procedure includes a Swan-Ganz catheter, for which carrier B allows a separate payment. As a result, surgeons in carrier A's area bill 5 percent more for a bypass procedure than surgeons in carrier B's area, even though their bill for the sum of the procedure itself and related services is the same. In this example, charges in carrier A's area appear higher, even though they are not. Policies to reduce prevailing charges in carrier A's area and increase those in carrier B's area would be inequitable.

To prevent such inequities, the Commission is sponsoring research to measure variations in global fee definitions among carriers and to develop deflators to adjust for them. Thus in the example above, if carrier B's policies were chosen to be the numeraire, then carrier A's prevailing charges would be reduced by 5 percent before any geographic comparisons were made.[8]

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[8] It does not matter whether the numeraire reflects the policies of carrier A, carrier B, or an intermediate policy.

CHAPTER 9 ASSIGNMENT AND THE PARTICIPATING PHYSICIAN PROGRAM: CURRENT STATUS

Since the inception of the Medicare program, physicians have been free to accept or reject assignment on a claim-by-claim basis. Assignment means that a physician bills Medicare directly, agreeing to accept Medicare's allowed charge as payment in full for his services (the patient is billed only for the Part B deductible and coinsurance). When assignment is not taken, the physician bills the beneficiary directly; the beneficiary then submits the bill to Medicare for reimbursement for Medicare's share of allowed charges. In this case the beneficiary is financially liable not only for the Part B coinsurance and deductible, but also for any amount by which the physician's billed charge exceeds the Medicare allowed charge. This excess amount is known as the balance bill or extra bill.[1]

In recent years, Medicare's policy of allowing open-ended extra billing has come under increasing attack, and legislation has established a series of incentives for physicians to accept assignment and a set of limits on extra billing.

This and the following chapter deal with assignment, balance billing, and related issues. This chapter concentrates on the background and current status of Medicare policy. It describes what is at stake in extra billing, summarizes the extensive changes that have occurred in Medicare's extra billing policies since 1984, outlines trends and offers an analysis of their causes, presents some important administrative issues, and describes recent state action. The following chapter deals with policy options for assignment and extra billing.

THE STAKES

Medicare involves three parties: beneficiaries, providers, and the general public, which pays for most of the program through taxes. Each has an important stake in policies concerning assignment. The most obvious stake is financial. In calendar year 1987, although 75 percent of Part B allowed charges were attributable to assigned services, beneficiary liability for balance billing on unassigned services was about $2.5 to $3.1 billion, or approximately $82 to $100 per beneficiary.[2] Physician organizations testify that beneficiaries do not pay the full amount of this liability, but the percentage of the total that is actually unpaid is unknown.

Broadly speaking, changes in financial flows for one of the three parties to Medicare come out of the pockets of the other two. Thus assignment policy involves a controversy over some $2.5 to $3.1 billion that is now the

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[1] Those who think the Medicare reasonable charge should be payment in full may prefer the term "extra billing," while those who consider Medicare's payment to be an amount paid toward the charge made by a physician may prefer the term "balance billing." The text uses "extra billing" and "balance billing" interchangeably.

[2] The lower figures are preliminary estimates from HCFA Reasonable Charge and Denial Activity Reports. The higher figures are estimates from the Congressional Budget Office.

responsibility of beneficiaries but, if policy changed, some or all of this amount would become a charge to the American taxpayer or a reduction in physicians' income.[3] However, in different ways, for all three parties the issue goes beyond a financial stake.

The Stake for Beneficiaries

For beneficiaries the financial stake in Medicare's policy on extra billing needs to be viewed in light of other financial responsibilities for health care that they face. Rising health care costs have led to the elderly today spending about the same percentage of their income on health care--15 percent--as they did before the advent of Medicare. This has eroded some of the financial protection that Medicare was created to provide. The Health Care Financing Administration (HCFA) actuary estimates that Medicare beneficiaries spent an average of $600 for Part B services in 1987 (including premiums). Moreover, beneficiaries have just absorbed a 38.5 percent increase in the monthly Part B premium.[4]

Despite large reductions in the percentage of the elderly in poverty since Medicare's inception, a substantial proportion of the elderly remain highly vulnerable to the financial burden of extra bills or other health care costs. Chapter 2 discusses both the financial status of the elderly and their total out-of-pocket liabilities for health services in more detail.

For most Medicare beneficiaries, extra bills become out-of-pocket liabilities. While assignment is required on services provided to the 9 percent of Medicare enrollees who are also covered by Medicaid, only 29 percent of the poor elderly and 8 percent of the near-poor elderly have Medicaid coverage (The Commonwealth Fund Commission on Elderly People Living Alone, November 1987). Private supplemental insurance generally does not cover liability for extra billing.[5] Therefore few of the elderly--be they poor or nonpoor--have financial protection against extra billing. Legislation under consideration in Congress to add catastrophic coverage to Medicare would not change this. The legislation does not include extra billing liability in the beneficiary expenses they cover.

The burden of extra billing falls more heavily on beneficiaries than its dollar amount suggests because claim-by-claim assignment makes it difficult for them to know in advance when they will face extra billing or how large the extra

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[3] If physicians absorbed the current cost of balance bills, their income would actually fall by less than this amount, since as noted above, beneficiaries apparently do not pay the entire amount.

[4] This 38.5 percent includes some "catch-up" increase as well as reflecting one year's increase in total Part B costs. (The premium is supposed to cover one-fourth of these costs.) Between 1984--when many of the changes described in this chapter began--and 1988, the overall increase in the Part B premium was 70 percent. The compound annual rate of increase over this four-year period was 14 percent.

[5] According to the 1977 National Medical Care Expenditure Survey, only 41 percent of those covered by supplemental policies had any coverage for the cost of additional charges for physicians' services delivered to inpatients, and only 29 percent had any such coverage for services performed outside the hospital.

bills will be. Currently, about 45 to 50 percent of Medicare physicians' services (as measured by the dollar volume of charges) involve no balance billing because participating physicians provide these services and have agreed to accept assignment for all services they provide. However, beneficiaries can be less sure of what extra bills they will face for the other 50 to 55 percent of physicians' services, since these are provided by nonparticipating physicians. In the end, beneficiaries receive extra bills on about half of the services provided by nonparticipating physicians.[6] Beneficiaries who do receive extra bills are typically liable for about 40 percent of the physician's charge (including the 20 percent copayment on the Medicare allowed charge). Thus, although beneficiaries' liabilities for extra bills were only about one-seventh of total Part B beneficiary liability in 1987, the impact of extra bills on individual beneficiaries who have serious illness can be larger than this fraction suggests.

In theory beneficiaries can attempt to avoid balance bills by requesting assignment from their physicians or searching for physicians who take assignment; in practice, however, this is often difficult. Patients who have a longstanding relationship with a physician they trust may be reluctant to shop around for a physician on the basis of assignment policy. Or they may be too ill to contemplate switching. Seriously ill patients face the largest bills and are the least able to shop around for a physician.[7] Beneficiaries may be embarrassed to request assignment from their physician. Many beneficiaries do not know about assignment policy, the possibilities for balance billing, or how to avoid it--Medicare's physician payment policy is very complex. Moreover, except for participating providers, physicians need have no fixed or defined policy on assignment, so even a fully informed consumer could face problems finding out what balance billing to expect. Since physicians are not required to discuss billing at the time of service, beneficiaries may be dismayed to receive balance bills for services they thought were "covered" by Medicare.

The Stake for Physicians

For physicians, policy on extra billing involves not only income, but also the right to determine their own charges for professional services. They see this right threatened by Medicare regulation of extra billing and maintain that the patient, their true client, is the only one who can decide whether their billed

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A recent Health Insurance Association of America survey of commercial insurers suggested that about 20 percent of commercial Medigap plans have some balance-billing coverage, while a similar survey among Blue Cross/Blue Shield insurers indicated that about one-third of Blue Cross/Blue Shield plans include some balance-billing coverage. Generally, if coverage of balance billing is included, it extends only to the usual, customary, and reasonable (UCR) levels used by that insurer in its private plans for nonelderly.

[6] Assignment is required for the 9 percent of Medicare beneficiaries who are also Medicaid recipients and for laboratory services. Thus, the voluntary assignment percentage on services rendered by nonparticipating physicians is somewhat smaller.

[7] For example, in 1976, average Part B expenses for the 5 percent of beneficiaries who died were approximately four times the Part B expenses of other beneficiaries (Lubitz and Prihoda, 1984).

charge appropriately reflects the value of the service they provide, including special training or quality they may offer. Pressures on physician fees from private payers using preferred provider organizations (PPOs) or health maintenance organizations (HMOs) are currently mounting, increasing physicians' concerns about their right to set their own fees. Moreover, physicians are concerned that, with limits on extra billing, Medicare may further constrain or even reduce their fees. Steady growth in the percent by which Medicare's allowed charges fall short of billed charges--from 10 percent in 1970 to about 27 percent currently--and massive federal deficits give this concern added weight.

The Taxpayers' Stake

The taxpayers' financial stake in Medicare assignment policy extends beyond the $2.5 to $3.1 billion of beneficiary liability for balance billing. For example, an argument that Medicare's allowed charges are too low to permit further major limits on balance billing is an argument that to curb balance billing, Medicare payment levels would have to increase. That would mean increased costs for most of the over $30 billion of physicians' services that Medicare will help pay for this year. Also, a reduction in balance billing would probably increase use of services (because beneficiaries' out-of-pocket costs decline) and that would increase Medicare costs.[8]

Basic issues of public policy are also at stake. In the Medicare program, should the government act as a prudent purchaser, seeking the lowest prices from physicians, as it does in most of its purchasing? Or is the appropriate stance one of hands off, let the beneficiary choose and pay for any differences in prices, which is the position of the government in its Federal Employees Health Benefits Program? Is health care somehow special, so that public agencies should play a special role in overseeing prices, much as they have a prominent role in the financing of health care? Factors possibly calling for a special role include the urgent and stressful situation often surrounding the delivery of health care; the great extent of health insurance coverage, which makes both patient and physician relatively indifferent to cost; the often technical and specialized nature of care, which makes patients ill-equipped to act as well-informed consumers; and the view that health care is a right, not an ordinary service best left to the market.

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[8] Studies have consistently found that reduced out-of-pocket costs lead to increased use of health care. This finding has held in multivariate statistical studies; in "natural experiments" (in which the health insurance coverage of a group was changed); and in a genuine prospective experiment with a control group and multiple treatment groups, each with a different health insurance plan. Estimates of the size of the increase have varied. (For a summary of this research, see Manning, Newhouse, Duan, et. al., 1987.) Although these studies have generally dealt with the non-elderly population, the one study to focus on the Medicare elderly also found that use of care increased with greater insurance coverage (Link, Long, and Settle, 1980). It is also a basic principle among actuaries who work in the health care field that reduced out-of-pocket costs lead to increased use of services and greater total spending.

ASSIGNMENT POLICIES IN OTHER INSURANCE SYSTEMS

Other health insurance systems do not use Medicare's claim-by-claim assignment policy. Private Blue Shield plans usually have contracts under which physicians agree to accept the plan's allowed charge for all services or else generally forgo the opportunity to receive payment directly from Blue Shield. In other words, the plans have all-or-nothing assignment, but no claim-by-claim assignment. In private commercial insurers' plans, the physician usually may, with the patient's permission, bill the insurer directly. Although not prohibited from extra billing, physicians customarily accept the plan's Usual, Customary, and Reasonable (UCR) charge. Both Blue Shield plans and commercial UCR plans often have allowed charges that are much closer to physicians' billed charges than are Medicare's allowed charges.[9]

Compared with physicians in other western countries, where fee schedules negotiated between government and physicians' organizations are the norm, U.S. physicians have extraordinary freedom in setting fees. In France, West Germany, and Canada extra billing is generally prohibited in the public (or quasi-public) health insurance programs that dominate the purchase of physician services.[10]

As a practical matter, Medicare's demand-side power in the market for physician services is much more limited than the power of the payers in countries with universal entitlements. In these countries, the government (or coordinated quasi-governmental payers) pays for nearly all physician services. In the United States, Medicare accounts for only about 24 percent of the average physician's income.[11] In effect, Medicare must compete with myriad private payers to purchase medical services for beneficiaries. Attempts by Medicare to limit or eliminate extra billing (other than by raising allowed charges) thus entail some risk of limiting access to care by prompting physicians to decrease their Medicare caseloads relative to private caseloads.

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[9] There is great variability in benefits and payment systems among commercial plans. The generalizations here refer to typical UCR plans.

[10] There are some exceptions to the prohibition. In Germany about 10 percent of the population is insured through private indemnity plans; physicians may extra bill for these private patients. In France, a select group of prestigious academic physicians are allowed to balance bill. In Canada extra billing is still permitted in some provinces, but provinces are encouraged to prohibit or limit extra billing by financial pressure from the national government. Even in provinces where it is technically allowed, extra billing is virtually nonexistent.

[11] This figure is based on responses to a 1987 survey of physicians conducted by *Medical Economics* (Paxton, 1987). The specific question asked physicians what percent of their gross practice income derived from Medicare. The response probably included patient coinsurance and deductible as "Medicare income"; it may also have included income from extra billing of Medicare patients. There probably was some variation in interpretation among physicians surveyed. The American Medical Association's (AMA) Socioeconomic Monitoring System (a physician survey that includes a similarly-worded question) reported that Medicare accounted for 28 percent of the average physician's income in 1986.

However, for certain specialties with heavy elderly caseloads, Medicare's contribution to physician income is much higher than the average. For example, 37 percent of internists' income derives from Medicare; the corresponding figures for ophthalmologists and thoracic surgeons are greater than 40 percent (Paxton, 1987). Certain procedures are performed predominantly among the Medicare population. In 1983, 74 percent of hip replacements, 80 percent of pacemaker-related surgeries, and about 80 percent of cataract surgeries were performed on patients over the age of 65 (Burney and Schieber, 1985). Medicare's market power thus varies across specialties and procedures.

RECENT MEDICARE CHANGES

Beginning in 1984, legislation brought a series of changes in Medicare's policy on assignment and extra billing. These included major departures from the longstanding policies of claim-by-claim assignment and unlimited extra billing. Their intention was to make it easier for beneficiaries to avoid extra billing by giving incentives to physicians to accept assignment, particularly to accept assignment on all claims. The changes imposed direct limits on extra billing and made it easier for patients to find physicians who accept assignment.

The Fee Freeze

In response to a huge federal budget deficit and rapidly rising Part B costs, the Deficit Reduction Act of 1984 (DEFRA) froze Medicare's allowable charges on all claims. To prevent increased balance billing from neutralizing the freeze and adding to beneficiary liabilities, DEFRA also froze billed charges of nonparticipating physicians (see below for a further description of the Participating Physician Program). Thus a system in which physicians had complete freedom in the amount of extra billing allowed on nonassigned claims gave way to one in which, at least temporarily, every claim had a ceiling price. After statutory extension, the freeze ended on May 1, 1986 for participating physicians, but remained in effect until January 1, 1987, for nonparticipating physicians.

Maximum Allowable Actual Charge

The maximum allowable actual charge (MAAC) was created by the Omnibus Budget Reconciliation Act of 1986 to continue constraints on the actual charges of nonparticipating physicians after the end of the freeze. Currently scheduled to be in effect from 1987 to 1990, MAACs may be extended beyond that period if they are not superceded by new policies on extra billing. MAACs are based primarily on actual charges in the second quarter of 1984 (the period just before the enactment of DEFRA). For physicians with relatively high charges--those exceeding 115 percent of the prevailing charge for nonparticipating physicians--the MAAC limits increases in charges to 1 percent a year. Physicians whose charges are less than 115 percent of the prevailing charge are allowed to increase charges to that level over the four-year period.[12]

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[12] MAAC limits originally applied to the average annual charge level for a given service. The Omnibus Budget Reconciliation Act of 1987 revised MAACs so that the limit applies to each service.

The Participating Physician Program

The Participating Physician and Supplier Program (PAR) was created in 1984 by DEFRA to provide incentives for physicians to agree in advance to accept assignment on all Medicare claims during a year.[13] The incentives have been strengthened in subsequent legislation.

There are several financial incentives to participate. Participating physicians were permitted to increase their billed charges during the freeze, while nonparticipating physicians were forbidden to do so. Although the actual payments participating physicians received from Medicare remained frozen, the higher billed charges formed the basis for higher Medicare payments in the post freeze period, since Medicare payments depend, in part, upon the prices a physician has charged in the past (the customary charge). As noted, the freeze also ended sooner for participating physicians than for others. In 1987, prevailing charges for participating physicians were set 4 percent higher than those for nonparticipating physicians; this differential will increase to 4.5 percent on April 1, 1988 and to 5.0 percent in 1989.

In addition, Medicare publicizes the availability of participating physicians in a variety of ways. Carriers publish directories of participating physicians that are available to beneficiaries upon request at no charge. Once a year the Social Security Administration includes an enclosure with the monthly check sent to Social Security beneficiaries informing them that the directories are available. The directories are also sent to hospitals, Social Security offices, senior citizens' organizations, and PAR physicians themselves. When making discharge referrals, hospitals are requested to inform patients of the option to see participating physicians. Emblems advertising PAR status are given to PAR physicians for display in their offices. The "Explanation of Medicare Benefits" form sent to beneficiaries with unassigned claims informs them that they could use a participating physician, and refers them to a toll-free telephone number for information. A survey conducted for the American Association of Retired Persons in late 1987 found that 70 percent of beneficiaries surveyed had some awareness of the PAR program (Annual Older Americans Survey, 1987).

Finally, participating physicians enjoy a number of administrative benefits their nonparticipating colleagues do not. They are free of various requirements such as MAACs and the mandate to inform beneficiaries in advance of the estimated extra bill for high-cost elective surgery that will be performed on a nonassigned basis.[14] Legislation requires carriers to process PAR claims in 19 days as opposed to 26 days for non-PAR claims.

Narrower-Focus Changes

In addition, several changes more limited in applicability than the freeze, MAACs, and the PAR program, but similar in spirit, have gone into effect since 1984. In Omnibus Budget Reconciliation Act of 1986 (OBRA86) and Omnibus Budget Reconciliation Act of 1987 (OBRA87) Congress imposed specific limits on

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[13] Nonphysician Part B suppliers can participate. However, given the Physician Payment Review Commission's stated charge, the Commission focuses on physician participation throughout this chapter.

[14] High-cost surgery is defined as surgery with charges greater than $500.

actual charges for procedures whose allowable charges were systematically reduced because the procedures were considered to be overvalued. Charges in 1988 may not exceed 125 percent of the reduced prevailing charge plus one-half the difference between the 125 percent level and the 1987 MAAC. In 1989 charges may not exceed 125 percent of the reduced prevailing charge, and in subsequent years they may not exceed 115 percent. These constraints on actual charges seek to prevent the reimbursement reductions applied to overvalued procedures from translating into increased extra billing of beneficiaries.[15]

OBRA87 introduced special provisions for services of certain hospital-based physicians. The Secretary of Health and Human Services, in consultation with the American College of Radiology and the Commission, is directed to develop a national fee schedule for the services of radiologists by August 1, 1988. Actual charges for services provided by radiologists will be limited to 125 percent of the fee schedule amount in 1989; 120 percent in 1990; and 115 percent in 1991. The Secretary must also develop a fee schedule for pathology services. Further Congressional action is required to adopt the pathology fee schedule; policies with respect to extra billing were not stipulated in OBRA87.[16]

As a result of changes over the last few years, assignment is now required for clinical laboratory services provided in independent laboratories and in physicians' offices. That is, no Medicare reimbursement may be paid for non-assigned laboratory claims.[17] In addition, physicians may no longer "mark up" charges for laboratory tests performed by outside sources.

Finally, OBRA86 provisions that became effective in the fall of 1987 prohibit physicians from collecting any payments from beneficiaries for nonassigned services deemed by Medicare to be "medically unnecessary," unless the beneficiary signs a statement accepting full liability in advance.[18]

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[15] The constraints, however, would fail to prevent increases in beneficiary liability in cases in which the physician previously accepted assignment but now chooses not to and bills up to the ceiling level.

[16] Fee schedules for radiology and pathology were conceived as a compromise alternative to physician DRGs for these specialties. The physician DRGs were considered but rejected by Congress (in committee) after opposition from physician organizations. There may be sound reasons to consider balance billing policy for hospital-based physicians as a special case; see chapter 10 for a discussion of this issue.

[17] The Commission previously expressed concern over reports that some physicians reluctant to accept assignment on laboratory tests misleadingly told beneficiaries that Medicare did not cover the test, and then billed the beneficiary their full charge for it. Congress addressed this practice in OBRA87, stipulating fines or suspension from Medicare for physicians who willfully engage in it.

[18] Congress views this simply as an extension of an existing beneficiary protection, since assigned claims are not reimbursed if they are for "medically unnecessary services." For more detailed discussion of this issue, see chapter 12.

TRENDS IN ASSIGNMENT AND PARTICIPATION RATES

Assignment rates are one measure of Medicare's achieving its primary goals of offering beneficiaries access to quality medical care and financial protection from high costs of care. They indicate the extent of beneficiaries' access to care without out-of-pocket costs beyond the expected deductible and coinsurance. If physicians who accept assignment are readily available, beneficiaries are less likely to avoid or postpone care for fear of large, unpredictable out-of-pocket costs.

Participation rates are significant through their effects on assignment rates. In addition, participation offers beneficiaries the certainty of obtaining services on an assigned basis, an assurance often not otherwise available, particularly for beneficiaries who need the services of a physician other than their regular doctor. From the beneficiary's point of view, though, it is sometimes not financially important whether his or her physician participates, since it is only the physician's assignment policy toward the particular patient that determines out-of-pocket liability.

The relative size of beneficiary liability on unassigned claims is measured by the charge reduction rate, the percentage difference between the actual charge and Medicare's allowed charge. Therefore, it is useful to examine trends in assignment and reduction rates simultaneously.

Trends in National Assignment Rates

After remaining relatively stable in the mid-1970s at just under 50 percent, nationwide assignment rates for total Part B services began to rise gradually but consistently in the late 1970s, reaching 56.5 percent by 1983 (table 9-1).[19] Assignment rates then increased dramatically by 20 percentage points between 1983--just before the inception of the PAR program--and 1987. Significantly, much of that striking increase occurred during the period of the fee freeze. Most of the increase in assignment is attributable to the establishment and growth of the PAR program. Assignment increased 12 percentage points between 1983--immediately before the PAR program went into effect--and 1985, its first full year of operation. Factors other than the PAR program which contributed to that increase include required assignment for laboratory claims and, probably, increased competition resulting from continuing increases in physician supply.[20]

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[19] Assignment rates can be measured in two ways: as the percent of claims accepted on assignment, or as the percent of covered charges accepted on assignment. The latter is more meaningful from the standpoint of beneficiary protection, and throughout this report assignment rates are reported as a percent of covered charges. As table 9-1 indicates, however, assignment on claims closely tracks assignment on covered charges. Unless otherwise noted, the term "participation rate" refers to the percent of physicians signing participation agreements.

[20] Required assignment for laboratory services outside of physicians' offices also went into effect in 1984, but that change could not have increased the assignment rate by more than 2 percentage points.

Table 9-1. Assignment Rates and Charge Reduction Rates for Total Part B Services, 1973-87 (in percent)

Calendar Year	Assignment Rate		Charge Reduction Rate	
	Claims	Charges	All Claims	Unassigned Claims
1973	56.9	49.7	12.2	12.6
1974	56.0	49.1	14.4	14.7
1975	55.9	49.0	17.4	17.7
1976	54.4	48.9	19.5	19.8
1977	54.0	49.6	19.0	19.0
1978	53.7	50.9	19.3	19.2
1979	54.0	51.9	20.8	20.7
1980	54.2	52.9	22.4	22.5
1981	54.9	54.2	23.5	23.8
1982	54.4	55.4	23.7	23.9
1983	55.8	56.5	23.2	23.0
1984	59.2	59.7	24.9	24.2
1985	68.5	68.6	26.9	25.9
1986	68.0	69.6	27.9	26.9
1987 (prelim.)	73.4	75.4	27.2	24.7

Sources: HCFA, Medicare Participating Physician/Supplier Claims Workloads Reports and Reasonable Charge and Denial Reports

Note: In order to make the assignment rates for years prior to 1984 comparable to those for later years, gross assignment rates are presented in table 1. The gross assignment rate--as opposed to the more commonly reported net assignment rate--includes billings received on certain specialized claim forms that were eliminated in 1984. As of 1985, gross assignment rates became substantively the same as net assignment rates, save for minor reporting discrepancies.

Recent increases in assignment are partly attributable to increasing assignment among nonparticipating physicians. Rosenbach, Harrow, and Mitchell (1988) found that assignment rates of nonparticipating physicians have risen substantially since the inception of the PAR program, from an average of 24 percent in 1985 to 30 percent in 1987. This supports the hypothesis that increased competition from participating physicians may encourage nonparticipating physicians to take assignment more frequently.

The assignment rates shown in table 9-1 overstate voluntary assignment somewhat. Providers have always been required to accept assignment for

Medicaid recipients, who currently comprise 9 percent of Medicare enrollees.[21] Assignment for all laboratory tests has been required since 1986.[22] In 1985, laboratory services accounted for between 5 and 6 percent of Part B expenditures.[23] The 1987 voluntary assignment rate--that is, the assignment rate on services other than laboratory services and services provided to Medicaid beneficiaries--was approximately 70 percent, compared to the 75 percent overall assignment rate.[24]

Assignment rates for physicians' services (for which data are available only since 1984) are slightly lower than the assignment rates for all Part B services.[25] In calendar year 1987, assignment for physician services was 72.6 percent compared to 75.4 percent for all Part B services. (Again, the voluntary assignment rates would be a few percentage points lower.) Participating physicians deliver approximately two-thirds of all physicians' services provided on an assigned basis.

Throughout the history of the PAR program, national physician participation rates have hovered around 30 percent--that is, approximately 30 percent of U.S. physicians who serve Medicare patients have signed participation agreements. However, since the beginning of the program, the covered charges of participating physicians have increased as a percent of total covered Medicare charges (see table 9-2). The explanation of this striking change is not known, although we do know that it is not due to changes in which physicians participate.[26] The group of physicians who participate has changed little since the initiation of the PAR program (Rosenbach, Harrow, and Mitchell, 1988).

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[21] Required assignment for Medicaid recipients did not significantly influence the dramatic increase in overall assignment rates since 1983. The percentage of Medicare enrollees who receive Medicaid--and thus the percent of covered charges attributable to their care--actually fell slightly since then.

[22] Major changes in assignment policy toward laboratory services were made both in 1984 and 1986. DEFRA (1984) required assignment for clinical laboratory tests performed in independent laboratories; Consolidated Omnibus Budget Reconciliation Act (COBRA) (enacted 1986) required assignment for laboratory tests performed in physicians' offices.

[23] HCFA Bureau of Data, Management, and Strategy, analysis of 1985 Part B Medicare Annual Data (BMAD) files.

[24] PPRC estimate.

[25] The Medicare definition of "physician," includes not only doctors of medicine and osteopathy, but also limited-license practitioners such as optometrists, podiatrists, and chiropractors.

[26] For further discussion of this trend, particularly as it relates to physicians' Medicare caseload, see "Competitiveness of the Local Medical Market" later in this chapter.

Table 9-2. The Impact of The Participating Physician Program, 1984-87 (in percent)

PAR Period	Physicians Signing PAR Agreements	Covered Charges
Oct. 84-Sep. 85	30.4	36.0
Oct. 85-Apr. 86	28.4	36.3
Apr. 86-Dec. 86	28.3	38.7
Jan. 87-Aug. 87	30.6	46.5 (approximate)

Sources: HCFA, Medicare Participating Physician/Supplier Claims Workloads Reports and unpublished data from HCFA, Bureau of Program Operations.

Note: Covered charges are PAR physicians' covered charges as a percent of total covered charges for physicians' services.

Beneficiary Liability on Unassigned Claims

While rising assignment rates and increased percentages of covered charges attributable to PAR physicians are good news for many beneficiaries, they do not signal increased protection against out-of-pocket costs for others. Between 1976 and 1986 the average reduction on unassigned Part B claims--the percentage difference between the actual charge and the Medicare approved charge--increased from less than 20 percent to nearly 27 percent (table 9-1).[27] Thus for the decreasing proportion of services beneficiaries did not obtain on an assigned basis, out-of-pocket liability increased as Medicare allowed charges failed to keep pace with billed charges.

However, between 1983 and 1986, the actual dollar value of beneficiary liability for extra billing remained relatively constant as increasing assignment rates offset increases in charge reduction rates and total expenditures (table 9-3).

MAACs appear to have substantially limited the size of extra bills in 1987. Reduction rates on unassigned claims fell by over 2 percentage points, from 26.9 percent in 1986 to 24.7 percent in 1987 (table 9-1). This reduction--coupled with rising assignment--resulted in an estimated $360 million drop in beneficiary liability for extra billing (table 9-3). Little is known regarding how this reduction was distributed among beneficiaries.

[27] The Medicare Economic Index limited prevailing charges throughout this period.

Table 9-3. Beneficiary Liability for Extra Billing on Unassigned Claims, For Total Part B Services, 1979-87

Calendar Year	Total Liability (in billions of dollars)	Liability Per Beneficiary (in dollars)
1979	1.16	43
1980	1.54	56
1981	1.88	67
1982	2.28	80
1983	2.51	87
1984	2.72	92
1985	2.60	87
1986	2.89	94
1987 (preliminary)	2.54	82

Sources: HCFA Reasonable Charge and Denial Activity Reports; unpublished data from HCFA Office of the Actuary, Division of National Cost Estimates.

Regional and Specialty Variation in Assignment and Participation Rates

National data on assignment and participation rates mask significant variations among geographic regions and specialties. These large variations remain despite rising overall assignment rates. They have major ramifications for beneficiaries: the likelihood of obtaining care on an assigned basis depends significantly on the beneficiary's geographic location and the types of services needed.

Among the 50 states, physician assignment rates varied from 24 percent to 95 percent during the first quarter of 1987 (Burney and Paradise, 1987). (Appendix 9-A lists assignment and participation rates by state.) Generally the highest assignment rates occurred in the Northeast, the lowest in the North Central region and the South. However, large differences may be seen among states and localities within regions as well as among regions.

Physician participation rates also vary widely around the national average of 30 percent, with a range of 10 percent to 70 percent among states (appendix 9-A). There is a highly significant correlation between states' pre-PAR assignment rates and subsequent participation rates. In particular, states that traditionally have had low assignment rates have low participation rates. For states that had moderate or high assignment rates, current participation rates are less easily predicted. In general, physicians are less likely to participate in rural areas than in urban areas. Mitchell, Rosenbach, and Cromwell (1987) found that rural participation averaged six percentage points lower than urban.

Geographic variations in assignment and participation rates are particularly striking considering that charge reduction rates are much less varied. Reduction rates for all Part B services range from 22 percent to 32 percent among states, with the majority between 25 percent and 29 percent (appendix 9-A).

Assignment rates also show large variation among specialties, although there is less variation among specialties than among states (table 9-4).[28] In 1985, they ranged from a low of 51 percent for anesthesiology to a high of 81 percent for psychiatry. Primary care specialties have lower assignment rates than medical subspecialties (e.g., 59 percent for general practice, 60 percent for family practice, and 62 percent for internal medicine versus 67 percent for cardiology and 74 percent for gastroenterology). In surgery, however, general surgery has a somewhat higher assignment rate (63 percent) than most surgical subspecialties (55 percent to 65 percent).[29]

Table 9-4: Physician Assignment, Participation, and Charge Reduction Rates by Specialty (in percent)

Specialty	Assignment Rate 1985	Participation Rate 1987	Charge Reduction Rate 1983
Anesthesiology	51	20.3	38.2
Cardiology	67	43.2	23.5
Dermatology	64	38.1	19.5
Family Practice	60	27.1	23.6
Gastroenterology	74	n.a.	20.5
General Practice	59	25.6	23.9
General Surgery	73	37.2	26.1
Internal Medicine	62	33.6	22.6
Neurological Surgery	57	n.a.	32.0
Neurology	67	37.2	28.3
Obstetrics-Gynecology	54	31.5	n.a.
Ophthalmology	65	35.1	21.2
Orthopedic Surgery	55	32.6	27.1
Otolaryngology	56	27.0	27.3
Pathology	69	41.2	29.4
Psychiatry	81	28.6	32.4
Radiology	69	39.8	22.0
Thoracic Surgery	68	n.a.	23.3
Urology	55	30.7	25.0

Sources: BMAD 5 Percent Beneficiary File, unpublished data from HCFA, Bureau of Program Operations, HCFA 5 Percent Sample of Bill Summary Records

[28] Therefore, differences in specialty mix may contribute somewhat to regional variations in assignment but cannot account for the dramatic range of geographic variation demonstrated.

[29] Data on assignment by specialty in 1985, presented in table 9-4, is not comparable to the 1985 overall assignment rate presented in table 9-1. The data in table 9-1 encompasses all Part B providers, including suppliers. Moreover, data in table 9-4 derive from a 5 percent sample of claims data.

Variations in participation rates among specialties tend to correlate with long-standing differences in assignment patterns (table 9-4). General practitioners are less likely to participate than medical specialists or surgeons. General surgeons have notably high participation (37.2 percent in 1987); anesthesiologists have notably low participation (20.3 percent).

Charge reduction rates vary relatively little among specialties (table 9-4). In 1983, most specialties had reduction rates between 22 percent and 27 percent. However, psychiatry and anesthesiology had unusually large reductions, 33 percent and 38 percent, respectively.[30]

Variation in Assignment Rates by Place and Type of Service

Surgical procedures are more likely to be rendered on an assigned basis than medical services, and inpatient services, including hospital visits, are more frequently assigned than services in the office. These differences have significant ramifications for beneficiaries, since surgical and inpatient medical services generally are more expensive. Moreover, hospitalized patients tend to be sicker patients; this could mean that more seriously ill patients receive larger shares of care on an assigned basis than do healthier patients.

In 1985 assignment rates for surgical service were 61 percent compared with 51 percent for medical services. Assignment rates on consultations were notably high--68 percent, while anesthesia services had the lowest assignment rate, 50 percent.[31] In contrast, average charge reductions varied little between types of service--21 percent to 25 percent--with the exception of notably high reductions for anesthesia services, 39 percent (1983 data).[32]

In 1985, hospital inpatient and outpatient assignment rates averaged 68 percent and 63 percent, respectively, compared with 51 percent for services delivered in physicians' offices.[33] As with type of service, charge reduction rates vary little by place of service.

If the actual charges for office visits have been constrained by competition relative to charges for other services, physicians may be less willing to accept typical Medicare payment rates on office visits even though reduction rates on these services are not above average. Data are consistent with this supposition. For example, in 1983 medical services had an assignment rate of 35 percent in the office compared with 52 percent in the hospital (Burney and Schieber, 1985). Moreover, carrier representatives claim a common policy among physicians is to accept assignment on all services except office visits.

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[30] It is significant to note psychiatry's high assignment rate despite large charge reductions. Demand for psychiatric services may be more price-sensitive than for other medical services, limiting psychiatrists' ability to extra bill.

[31] Data from BMAD 5 percent beneficiary sample.

[32] HCFA 5 percent sample of bill summary records.

[33] Data from BMAD 5 percent beneficiary sample. Outpatient statistics presented here include data on some but not all ambulatory surgical centers. The ambiguity is due to discrepancies in carrier reporting practices.

PHYSICIAN DECISION-MAKING REGARDING ASSIGNMENT AND PARTICIPATION

An understanding of how physicians actually make assignment and participation decisions is essential to analyzing effects on beneficiaries. Understanding these decisions is also necessary to address policy questions such as whether assignment rates could be substantially increased without significant fee increases or without direct regulation of extra billing.

Although many of the same factors influence both assignment and participation decisions, a decision whether or not to participate is different from a claim-by-claim assignment decision. A decision regarding participation is, by definition, neither patient-specific nor service-specific, and it involves a commitment for an entire year. This section discusses together factors affecting both assignment and participation decisions, noting differences between the two. It reviews the following factors which are often assumed to influence physicians' assignment and participation decisions:

- o physician attitudes
- o the socioeconomic status of the beneficiary
- o Medicare payment levels
- o the competitiveness of the local medical market
- o physicians' interactions with carriers
- o additional requirements on nonparticipating physicians

Physician Attitudes

All available evidence emphasizes that philosophical as well as economic factors influence assignment and participation decisions. Participation decisions, in particular, are frequently driven by philosophical concerns.

Given the dramatic geographic variations in assignment rates despite limited variations in charge reduction rates, it seems likely that noneconomic factors play a significant role in assignment decisions. Some physicians, as a matter of principle, prefer to deal with patients rather than an agent of the government in collecting fees. Assignment practices apparently reflect these basic philosophical attitudes of physicians. Mitchell and Cromwell (1982), for example, found that after controlling for other factors, assignment rates were one-third lower among physicians who strongly disagreed with the statement "medical care is a right" than among those who agreed. Regional variations in assignment may reflect regional differences in the philosophical outlook of physicians. Carrier representatives widely report this to be the case.[34]

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[34] In a series of prearranged telephone interviews, the Commission surveyed representatives of twelve carriers regarding issues of assignment and participation. The major topics covered were claims processing as it relates to assignment and participation, local factors affecting assignment and participation, and provider and beneficiary relations.

Philosophical attitudes seem to play an even greater role in participation decisions. In fact, philosophical attitudes appear to be the single most influential factor affecting participation rates. The 1987 Physicians Practice Cost and Income Survey (PPCIS) indicates that despite various policy changes with financial ramifications, individual physicians have either consistently participated or consistently declined to participate (Rosenbach, Harrow, and Mitchell 1988).[35] The percentage of physicians who changed participation status sometime in the course of the first three PAR enrollment periods is only 12 percent. Nearly 80 percent who have never participated assert that a "very important" reason is their belief that physicians should have the freedom to set their own fees (Rosenbach, Harrow, and Mitchell, 1988). Membership surveys by the American Society of Internal Medicine (ASIM) and the Medical Group Management Association (MGMA) indicate similar responses (ASIM Carrier Accountability Monitoring Project, 1987; MGMA Medicare Payment and Participation Survey, 1987). A multivariate analysis based on data from the American Medical Association's Socioeconomic Monitoring System also suggests that noneconomic factors are primary in the participation decision (Cotter and Willer, 1985).

Carrier representatives indicate that they serve significant numbers of physicians who accept assignment nearly all of the time but who do not participate. They confirm that in many of these cases, the physicians are well informed yet deliberately refuse to sign participation agreements. In the PPCIS sample, the 6 percent of non-participants who were 100 percent assigners overwhelmingly cited their belief in physicians' freedom to set fees as the explanation for their refusal to participate (Rosenbach, Harrow, and Mitchell, 1988).

Of course, philosophical attitudes of physicians can also influence physicians to participate. Of participating physicians surveyed in the 1987 PPCIS, a large majority claimed that "advantage to patients" was an important motivation to participate; in fact, that was the most frequently cited reason to participate (Rosenbach, Harrow, and Mitchell, 1988).[36]

In many areas, participation rates remain surprisingly low in comparison with high assignment rates. For example, Michigan had a participation rate of 33 percent in 1987, close to the national average, while its assignment rate was nearly 90 percent, 20 percentage points above the national average. Massachusetts' 1987 participation rate remained below 45 percent, despite a state law mandating assignment. Given the financial incentives to participate

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[35] The Physicians' Practice Costs and Income Survey (PPCIS), sponsored by HCFA and conducted by the National Opinion Research Center (NORC) in 1984, surveyed a national sample of physicians regarding practice characteristics, costs, and reimbursement. A follow-up PPCIS was conducted in 1987, sponsored jointly by the Department of Health and Human Service's (DHHS) Assistant Secretary for Planning and Evaluation and HCFA.

[36] Of physicians who participated consistently from 1984 to 1987, 65 percent listed "advantage to patients" as a very important reason while another 24 percent considered it "somewhat important." Surveys among the membership of the American Society of Internal Medicine and the Medical Group Management Association yielded similar responses.

for physicians who generally accept assignment, noneconomic factors must primarily explain such discrepancies. Apparently, since PAR physicians are locked in--albeit voluntarily--to Medicare's fees for an entire year, some physicians view the PAR program as government fee-setting.

The Socioeconomic Status of Beneficiaries

The extent to which physicians consider a patient's financial situation in deciding whether to accept assignment is a critical issue in assessing the impact of claim-by-claim assignment on beneficiaries. Evidence on this question is mixed.

Two econometric studies found higher assignment rates for physicians whose practices, or practice locations, have a greater proportion of low-income persons (Mitchell and Cromwell, 1982; Rogers and Musacchio, 1983). On the other hand, a study that examined individual claims in one state did not find a relationship between assignment and patient income (Rice and McCall, 1983).[37]

Physicians' organizations have testified to the Commission that physicians do make informal judgments of beneficiary financial status when deciding whether or not to take assignment. (As described below, some physicians' organizations are developing formal programs to encourage physicians to accept assignment for low-income beneficiaries.) In addition to charitable motives, it may be in physicians' best economic interest to take assignment for low-income beneficiaries, and thus bill Medicare directly, since low-income beneficiaries seem most likely to delay payment or fail to pay their entire bill. However, beneficiary representatives point out that physicians do not always know beneficiaries' financial status, and that beneficiaries are often reluctant or embarrassed to discuss financial matters with their physician.

A study of 1983 Medicare claims data from four carriers suggests that physicians do consider patient-specific factors when making assignment decisions. Although most physicians included in the study had mixed assignment patterns in their overall practice, they rarely had mixed assignment patterns for individual patients (McMenamin, 1986). This finding, while supporting the hypothesis that physicians consider patient-specific factors in deciding whether to accept assignment, does not indicate whether socioeconomic factors or other factors are the basis of the decision. Nor does it indicate whether individual patients receive consistent treatment from different physicians.

Although physicians' decisions to participate are removed from financial considerations of individual beneficiaries, the general socioeconomic status of the community does affect their decisions. Mitchell, Rosenbach, and Cromwell (1987) found, other things equal, that an area with incomes 10 percent higher than others had about 6 percent less participation, implying a participation rate about 2 percentage points lower.

Medicare Payment Levels

As expected, both assignment and participation rates are sensitive to Medicare payment levels. The decision to take assignment or to participate is, after all, in part a question of physician income: At what level of payment will a physician be willing to forgo the potential for added income that extra billing affords?

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[37] All three studies controlled for the fact that assignment is required for Medicaid patients.

A variety of studies have noted a positive relationship between Medicare payment levels and assignment rates (Paringer, 1980; Mitchell and Cromwell, 1982; Rice and McCall, 1983; Rice, 1984).[38] Mitchell and Cromwell (1982) found that a 10 percent increase in Medicare prevailing charges would increase average assignment by about 15 percent, or 10 percentage points at current levels of assignment. However, Rice (1984) points out that assignment rates for surgical services do not show the sensitivity to payment levels indicated in data for aggregate services. He hypothesizes that the danger of patient default for costly surgical procedures may often outweigh potential gains from extra billing. General surgeons also have particularly high participation rates, even after controlling for other factors, presumably for similar reasons (Mitchell, Rosenbach, and Cromwell, 1987).

Participation rates also demonstrate significant sensitivity to Medicare payment levels. Data from the AMA Socioeconomic Monitoring System indicate than in 1985, 63 percent of physicians whose ratio of Medicare allowed charges to billed charges was higher than 80 percent chose to participate. In contrast, only 40 percent of physicians whose allowed-to-billed ratio was less than 50 percent participated (Cotter, 1985). Physicians who choose not to participate often cite generally inadequate fee levels as a major reason for their decision (ASIM Carrier Accountability Monitoring Project, 1987; MGMA Medicare Payment and Participation Survey, 1987; conversations with carriers).

Physicians' allowed-to-billed ratios are affected by the 4 percent differential in prevailing charges favoring PARs relative to non-PARs.[39] While the current 4 percent differential does not appear to be the prime factor encouraging participation, it can be significant at the margin. Among participating physicians in the PPCIS survey, 18 cited the fee differential as a "very important" factor in their decision (Rosenbach, Harrow, and Mitchell, 1988).[40]

Competitiveness of the Local Medical Market

Theoretically, one would expect assignment and participation rates to depend not only on beneficiary-related factors and fee levels, but also on the competitiveness of the local medical market. However, assignment and participation rates do not appear to increase significantly as physician-to-population ratios increase (Mitchell and Cromwell, 1982; Rice, 1984; Mitchell, Rosenbach, and Cromwell, 1987). Mitchell, Rosenbach, and Cromwell did, however, find that increased penetration of HMOs into the local market encourages participation. They estimated that a 50 percent increase in HMO

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[38] In some of these analyses prevailing charges were used as a measure of payment levels; in others, the ratio of Medicare allowed charges to actual charges was used.

[39] Theoretically, the fee differential should be a particularly relevant factor for physicians who often or virtually always accepted assignment before the PAR program. For physicians with histories of lower assignment, the 4 percent differential may not be significant compared with incremental income that they have traditionally gained by selective balance billing.

[40] Recall, however, that "advantages to patients" was cited as a very important reason by more than three times as many participating physicians.

enrollment (say from the typical 8 percent of the local population to 12 percent) increases the participation rate by 6.5 percent--that is, by about 2 percentage points.

The PAR program was designed to attract physicians facing competition by publicizing their PAR status and thereby directing Medicare beneficiaries to them. The greater a physician's Medicare caseload the more likely he or she is to participate (table 9-5).

Table 9-5. Physicians' Medicare Participation Rates by Medicare Caseload, October 1984

Medicare Caseload (percent of patients)	Participation Rate
1 to 10	30.4
11 to 20	29.4
21 to 30	29.8
31 to 40	34.3
41 to 60	39.2
61 or more	42.6

Source: Physicians Practice Costs and Income Survey, 1984-85.

At the same time, most of the participating physicians in the PPCIS survey claimed that the desire to increase their Medicare caseload was not an important factor in their decision to participate. This suggests that for many PAR physicians, the desire to protect and maintain Medicare patient load may be more significant than the desire to actually attract new patients (Rosenbach, Harrow, and Mitchell, 1988).

The degree to which participation has actually affected caseload is uncertain. In 1987 the percent of covered charges for physician services provided by PAR physicians increased dramatically (see table 9-2). However, most participating physicians in the PPCIS survey reported their Medicare caseload has remained the same since the inception of the PAR program. The explanation of this apparent paradox may be that the survey pre-dated recognition of the increase; it was conducted early in 1987.

Physicians' Experience with Carriers

Physicians' experience with their Medicare carriers also affects assignment and participation, especially if that experience is perceived as negative. A 10 percent reduction in claims denials would increase assignment by a full percentage point (Mitchell and Cromwell, 1982). High levels of denial or investigation of claims significantly discourages participation (Mitchell and Cromwell, 1987). Less easily measured variables, such as the adequacy of carrier response to inquiries, also are important. Of respondents to a 1987

survey by the American Society of Internal Medicine, 60 percent of physicians that had ceased to participate and 38 percent of those who had never participated claimed a major reason they decided not to participate was that "inquiries and appeals are not handled efficiently" (ASIM Carrier Accountability Monitoring Project, 1987).[41] The relative performance of various carriers might help explain some geographic variations in assignment and participation, particularly variations among carrier areas within the same geographic region.

Despite the general importance of physicians' experience with their carrier, speedier processing requirements for PAR claims relative to non-PAR claims do not seem to be a major factor in increasing participation rates.[42] In practice, processing times for non-PAR assigned claims are extremely close to those for PAR claims, though large differences remain between assigned and unassigned claims. Moreover, OBRA86 standards for processing time on all claims may have reduced the importance of prompt payment as an issue.

Added Requirements on Non-Participating Physicians

Carrier representatives suggest that added requirements on nonparticipating physicians--such as MAACs, pre-notification requirements for nonassigned elective surgery of more than $500, and recently implemented regulations that prohibit collection of fees from beneficiaries in cases of non-assigned services determined to be medically unnecessary--may influence physicians to participate.[43] Despite gains in participation that may result from such requirements, carrier representatives warn that their administrative complexity is increasing hostility between physicians and the Medicare program.

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[41] This survey focused on physicians' experience with their carriers and so may have overstated carrier-related issues compared with other factors influencing participation decisions.

[42] The MGMA and ASIM surveys both indicate numerous complaints concerning slow processing of PAR claims and Medicare claims in general. However, those surveys were conducted before prompt payment standards mandated by OBRA86 were fully implemented by the carriers. Conversations with carriers and medical society representatives suggest that the processing time differential is not a significant factor at the present time. No carrier responding to PPRC's informal survey listed the processing time differential as a significant incentive for physicians in their area to sign-up during the December 1987 enrollment period. This conclusion is further supported by an AARP analysis (Leader 1987).

[43] In conversations with PPRC, provider relations personnel from many carriers claimed physicians' desire to avoid such administrative complications was a primary inducement to participate. Some carriers noted increases in participation corresponding to implementation of the MAAC program. Two carriers mentioned that a noticeable number of physicians who previously had been sent warning letters regarding MAACs signed participation agreements during the most recent enrollment period. Significantly, though, some carriers noted that PAR enrollment data for their area did not show any correlation to MAAC implementation. National data on the December 1987 participation sign-up are not yet available.

ADMINISTRATIVE CONSIDERATIONS RELATED TO ASSIGNMENT AND PARTICIPATION

The implementation of the PAR program has entailed various administrative costs. Given the apparent success of the program in increasing assignment and helping patients to identify physicians that they can be sure will not balance bill, these costs may be worthwhile investments. Nonetheless, both the PAR program itself and additional requirements on nonparticipating physicians have generated administrative complexity and implementation problems that merit attention.

Implementing the PAR Program. The implementation of PAR increased costs of routine claims processing. The faster processing standard for PAR claims has forced many carriers to decrease check-writing intervals, generally from once a week to two or three times a week, thereby increasing costs. Publishing directories of participating physicians is also an administrative challenge for carriers, especially given short time frames for production. Issues regarding the publication, use, and accuracy of those directories are addressed in detail in appendix 9-B.

Implementing MAACs. Carrier representatives emphasize that the implementation of added requirements for nonparticipating physicians, particularly MAACs, has required more administrative effort than the implementation of the PAR program itself. Monitoring compliance with MAAC limits requires substantial administrative resources; many carriers have more personnel (as much as twice as many) engaged in monitoring MAACs than in "positive" provider relations.

Disputes over charge rollbacks for physicians with no reported charges during the base period complicated the initiation of MAACs. Also problematic was the application of MAACs to average charges: MAACs did not apply to charges for each specific service, but to average charges for that service annually, which entailed additional calculations for carriers. Physicians complained that they were not warned that their averages were exceeding MAACs in time to reduce the average sufficiently by the end of the year. Using average charges to calculate MAACs also made them inconsistent in application, since a physician could always choose to exceed the MAAC for a particular service provided to a particular beneficiary.

Both Congress and HCFA have addressed problems that accompanied MAAC implementation. OBRA87 modified MAACs to apply them to each specific service, which will make monitoring substantially simpler and will assure less uneven financial protection for beneficiaries. OBRA87 also addressed the rollback issue, providing that if physicians had charges for either Medicare or non-Medicare patients in the base period, the actual charges would be used as the basis for the physician's MAACs. Recognizing administrative difficulties encountered in the pilot year, HCFA relaxed the standards for MAAC censure in the fall of 1987.

Obstacles to Effective Implementation

A variety of administrative obstacles have hampered the implementation of the PAR program. Frequent changes in the Medicare program have caused gaps in

information provided to physicians. Limited funding of carriers for beneficiary outreach and provider relations has made it difficult for carriers to "market" the PAR program to either providers or beneficiaries.

Information Gaps. To make a completely informed decision on participation, physicians should know what local prevailing charges, their own customary charges, and their own MAACs will be during the upcoming participation period. In practice, this has not occurred. At the time of the December 1986 sign-up period, carriers had not yet calculated MAACs. Physicians' exasperation at being asked to make a PAR decision without this information was one factor in a lawsuit filed by the American Medical Association (AMA) that resulted in a temporary injunction and an extension of the 1986 sign-up period until the end of January 1987.

In 1987 neither updated prevailing information nor updated MAACs were available for the December sign-up period because Congress did not complete legislation affecting these calculations until late December. Recognizing the confusion this caused, Congress scheduled an additional PAR sign-up period for March 1988, with participation to be effective from April 1 to December 31, 1988.

These information gaps have not only resulted in additional financial and administrative costs of extended sign-up periods, but have also impeded carriers' ability to encourage participation. Carriers point out that prospects for provider relations activities geared to increasing PAR rates are limited if they are unable to give physicians all the financial information necessary to make an informed decision.

Limited Funding for Carriers' Provider and Beneficiary Relations. Carrier efforts to market the PAR program have also been hampered by extremely limited budgets for beneficiary education and provider relations. Carrier staffs have not recovered from major cutbacks in the early 1980s.[44] This staff shortage is particularly significant considering that physicians and physicians' organizations frequently complain about difficulties in getting carriers to respond to inquiries. In fact, such difficulties are commonly cited as reasons not to participate. Because of budget stringency, most carriers do little more than is mandated for beneficiary and provider relations.[45] Significantly, many carrier representatives express confidence that they could increase participation through enhanced provider and beneficiary relations if resources were adequate. However, a significant number disagree, arguing that for their regions the effect of centrally-mandated incentives (and disincentives) to participate would overwhelm provider relations efforts.

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[44] While carriers have been given budget allotments to cover specific PAR-related tasks such as publishing directories of participants, their resources for basic provider and beneficiary relations have not been increased.

[45] Most do participate in beneficiary outreach presentations through senior citizen organizations and provider information seminars--often at state or local medical society meetings. Many carriers complain, though, that they are reducing the number of such sessions; now some only respond to specific invitations. Some carriers publish provider or beneficiary newsletters; however, cutbacks--either cancellation or reduction in frequency--are occurring in these as well.

Although OBRA86 provided for bonus payments to reward carriers that significantly increased their participation rates, the bonus payments have not yet had an opportunity to work. No start-up money was given to carriers with innovative plans for encouraging participation. Although the first bonuses were scheduled to be paid in the spring of 1988, HCFA had not completed plans to administer and distribute the bonuses as of February 1988.[46] Carriers still did not know what magnitude of participation increases they would need to be eligible and how much of a bonus they could expect. Moreover, four months into fiscal year 1988, many carriers still did not know their final budget allotments. They have thus been reluctant to engage in any discretionary provider relations activities.

STATE ACTION TO CONSTRAIN EXTRA BILLING

While federal policy has increased incentives for voluntary acceptance of assignment, certain states have considered more aggressive intervention to limit extra billing.

In 1985 Massachusetts became the first state to adopt legislation constraining Medicare balance billing beyond federally-imposed limitations. Under Chapter 475 of the Acts of 1985, Massachusetts required acceptance of assignment on all Medicare claims as a condition for medical licensure in the state. Chapter 475 was passed over the strenuous objection of the Massachusetts Medical Society, which argued that mandated assignment would jeopardize quality of care and access to care for Medicare beneficiaries. The legality of Chapter 475 withstood several court challenges by the Society, including an attempted appeal to the U.S. Supreme Court.

The regulatory and medical environment in which Massachusetts imposed mandatory assignment was unique in several ways. Massachusetts Blue Shield, the dominant insurer of physician services in the state, had required assignment on all services to private subscribers since 1968.[47] Massachusetts had also traditionally had extremely high voluntary assignment rates in Medicare. Moreover, the state has a high physician-to-population ratio. Thus state legislators deemed it unlikely that mandated assignment for Medicare would significantly impair access to care for Medicare beneficiaries.

The Massachusetts Medical Society continues to argue that quality of care and access are being compromised by mandatory assignment. At this time, there is little concrete evidence to support this. Only one Massachusetts physician has explicitly refused to see Medicare patients, although there are anecdotal reports of physician shortages on Cape Cod and in other areas with high proportions of elderly patients. Long-term consequences of the state's experiment with mandatory assignment remain to be evaluated. Regardless of what those consequences prove to be, it would be dangerous to generalize based on the Massachusetts experience, considering the state's unique characteristics.

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[46] Bonus payments have since been postponed until the summer of 1988 to take into account results of the March 1988 sign-up.

[47] This provision was statutorily enacted as part of Massachusetts Blue Shield's enabling legislation in 1984.

Since Massachusetts' enactment of mandatory assignment, a number of states have considered legislation to limit or prohibit balance billing. Though no statutes as stringent as Massachusetts' have been passed elsewhere, three states did approve legislation in 1987. All three expressly tie required assignment to the beneficiary's income level, which is voluntarily reported by the beneficiary. Rhode Island now defines Medicare balance billing of low-income beneficiaries (those with annual incomes less than $12,000, or $15,000 for a couple) as unprofessional conduct. Connecticut issues medical "courtesy cards" to low-income beneficiaries ($19,950 or $24,000 for a couple) guaranteeing acceptance of assignment by physicians who volunteer to cooperate. Physician cooperation will become mandatory if specified levels of voluntary cooperation are not achieved. Vermont forbids balance billing for beneficiaries below a moderate income level ($25,000 or $32,000 for a couple); however, office visits are exempted from regulation. Physicians found in violation must pay fines as well as restitution to the beneficiary.

A number of states rejected or tabled proposals to limit balance billing during their 1987 legislative sessions. Legislation that would have generally required assignment failed to pass in Arkansas, Florida, Iowa, Montana, New Hampshire, Maryland, Illinois, California, Oregon and Ohio.[48] In New Jersey a proposal for income-related mandatory assignment failed to gain support. In Washington a public referendum that would have defined balance billing as an unfair business practice under the state's consumer protection laws was defeated. At least 10 states are expected to consider or reconsider limitations of balance billing in their 1988 legislative sessions. As of March, 1988, bills had been defeated in committee in three states: Maryland, Iowa, and Colorado.

Because of concerns that state legislation to prohibit balance billing may have the unintended consequence of reducing access to care, such proposals have sometimes divided the beneficiary community.[49] States have no control over Medicare allowable charge levels, yet the fairness or unfairness of statutory extra billing constraints depends directly on the appropriateness of fees. The effects of state action on access to care thus may depend heavily on federally set allowable charge levels. (In states where allowable charges are deemed inappropriately low, physicians would be more likely to react to required assignment by decreasing their Medicare caseload than they would be in states with higher allowed charges.) The means-testing employed in the Connecticut, Rhode Island, and Vermont laws represent a departure from Medicare's established character as an entitlement program with no means-tested features.

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[48] These include bills that were voted down in floor votes, tabled in committee, or expired in committee. Not included are bills which were simply held over to the 1988 legislative session.

[49] In Washington, for example, the previously cited public referendum to outlaw balance billing was sponsored by the Puget Sound Council of Senior Citizens, but was opposed by the state chapter of the American Association of Retired Persons (AARP). The state AARP cited Washington's assignment rate of only 50 percent and information from the Public Health Service's Primary Care Health Manpower Shortage Area Designations as cause for concern that mandated assignment might significantly impair access to care for Medicare beneficiaries. Nearly 200,000 Washington residents currently live in designated health manpower shortage areas.

In some areas, state and county medical societies are operating or considering voluntary programs that request physicians take assignment for low-income beneficiaries.[50] Certain medical specialty societies have shown interest in such voluntary programs as well.[51]

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[50] Examples include the state medical societies of Iowa, Wisconsin, New Jersey, and Florida.

[51] The American Society of Internal Medicine sponsors "Personal Care," a voluntary program in which enrolled physicians agree to accept assignment or reduce fees to the Medicare approved amount for beneficiaries in financial need. Emblems in the cooperating physician's office encourage beneficiaries who may need special financial consideration to raise the issue with the physician. At least one surgical specialty society is considering endorsement of "Personal Care."

APPENDIX 9-A

ASSIGNMENT, PARTICIPATION, AND CHARGE REDUCTION RATES BY STATE, 1987
(in percent)

Census Division/ State	Assignment Rate, Physicians' Services	PAR Rate, Physicians' Services	Charge Reduction Rate, Total Part B Services
New England			
Connecticut	59.8	17.4	25.6
Maine	84.7	34.2	25.6
Massachusetts	98.1	43.8	32.1
New Hampshire	58.7	25.9	31.0
Rhode Island	95.0	50.8	36.4
Vermont	70.2	34.1	29.1
Middle Atlantic			
New Jersey	63.0	22.7	29.1
New York	72.6	24.1	32.5
Pennsylvania	89.7	38.1	32.6
East No. Central			
Illinois	59.0	26.7	25.3
Indiana	57.6	26.9	26.0
Michigan	89.3	32.7	31.4
Ohio	57.8	28.9	26.3
Wisconsin	56.6	35.1	23.1
West No. Central			
Iowa	53.4	25.1	27.1
Kansas	78.4	51.4	23.8
Minnesota	40.2	22.4	23.0
Missouri	60.6	24.5	23.5
Nebraska	42.4	25.7	25.9
No. Dakota	38.9	20.5	23.9
So. Dakota	27.5	12.7	21.3
South Atlantic			
Delaware	80.7	31.2	31.5
Dist. of Columbia	76.6	28.0	31.4
Florida	67.0	24.9	25.9
Georgia	67.8	25.8	28.0
Maryland	83.8	30.1	26.8
No. Carolina	64.6	31.4	27.5
So. Carolina	75.7	25.3	29.0
Virginia	72.8	33.6	25.5
West Virginia	77.1	37.5	30.0

APPENDIX 9-A (continued)

Census Division/ State	Assignment Rate, Physicians' Services	PAR Rate, Physicians' Services	Charge Reduction Rate, Total Part B Services
East So. Central			
Alabama	81.9	68.8	29.9
Kentucky	62.6	43.2	22.5
Mississippi	72.9	23.6	27.7
Tennessee	64.8	43.4	26.8
West So. Central			
Arkansas	80.5	42.0	27.8
Louisiana	66.8	18.1	27.4
Oklahoma	46.2	20.8	27.8
Texas	66.1	19.4	28.3
Mountain			
Arizona	56.4	28.1	23.9
Colorado	55.5	19.5	30.5
Idaho	24.2	10.4	24.7
Montana	42.2	17.0	21.7
Nevada	86.4	33.5	27.3
New Mexico	56.6	20.8	24.8
Utah	66.5	42.2	23.5
Wyoming	29.9	20.3	30.0
Pacific			
Washington	49.2	26.9	23.4
Oregon	45.6	26.1	21.5
California	73.4	38.9	26.5
Alaska	64.0	27.1	26.9
Hawaii	71.8	47.8	27.9

Sources: Burney and Paradise (1987); HCFA Bureau of Program Operations, and data derived from HCFA Reasonable Charge and Denial Activity Reports

Notes:

a) Assignment as percent of covered charges. Participation as percent of physicians signing PAR agreements. Charge reduction rates as percent of billed charges.

b) PAR is participation.

c) Assignment rates are for January-March 1987. PAR rates are for calendar year 1987. Charge reduction rates are for fiscal year 1986.

d) 1984 assignment rates include suppliers; physician-only data is not available. Thus, the 1984 rates are slightly overstated indicators of physician assignment. Nonetheless, they demonstrate relative assignment patterns before the PAR program.

APPENDIX 9-B

ISSUES RELATED TO MEDICARE PARTICIPATING PHYSICIAN DIRECTORIES

To publicize the availability of participating physicians, Medicare carriers publish annual directories of participating physicians. Directories cost about $2.00 to $3.00 each to produce and mail. Carriers are required to send a directory free of charge to any beneficiary who requests one, and HCFA has publicized beneficiaries' right to request directories in informational inserts sent with Social Security checks. Nevertheless, typically only about 1 percent of beneficiaries request directories. Additional directories are sent to hospitals, Social Security offices, senior citizen organizations, and to PAR physicians themselves. It is not clear how many beneficiaries directly or indirectly utilize such reference directories.

Carriers are required to list participating physicians by name and specialty in the directories. HCFA monitors their production to insure that proper form is used; carriers are responsible for verifying the actual information contained. The Commission has received some anecdotal reports of error-laden directories.[1] Because the various Medicare carriers all publish their own directories, it is virtually impossible to estimate the accuracy of directories in general without an extensive audit.

Carriers have reported the errors that do occur are often related to outdated information in their provider files. Physicians' specialties and practice addresses are taken from the carrier's main provider file for use in the directories. One problem, for example, is that the physician's billing address, not his practice address, may inadvertently appear in the directory. Carriers claim that many such errors have been rectified in the process of printing several directories. Some carriers periodically make comprehensive efforts to update their provider files. Carriers emphasize, however, that it is the physician's responsibility to keep the carrier informed of changes in address or specialty.

[1] Commissioner Jack Guildroy, for example, discovered errors when he investigated the Medicare Participating Physicians Directory for his locality.

CHAPTER 10 ASSIGNMENT AND THE PARTICIPATING PHYSICIAN PROGRAM: POLICY OPTIONS

Medicare's current situation with respect to assignment for physicians' services is paradoxical. Beneficiary leaders have testified to the Commission that beneficiaries frequently have difficulties finding a physician who will treat them without balance, or extra, billing.[1] Yet physicians accept assignment for nearly three-fourths of the dollar volume of Medicare services[2] even though Medicare pays them only about 75 cents on each dollar billed, and almost half of Medicare services are provided by physicians who have agreed to accept assignment on all claims and whose names can be found in a directory. It seems that the glass is both three-quarters full and half empty. The challenge is to consider alternative arrangements that might better meet the legitimate interests of beneficiaries, physicians, and taxpayers.

This chapter discusses Medicare policy options for assignment and participation. It first examines options for improvements within the framework of current policy and then turns to options involving major changes. It concludes with a discussion of the implications for Medicare's policy on balance billing of a fee schedule based primarily on resource costs. This chapter and Chapter 9 represent the initial stages of the Commission's work on assignment, participation, and balance billing. The Commission is not yet ready to make recommendations on these subjects.

CURRENT POLICY

Until 1984 Medicare policy on extra billing remained largely unchanged from the original policy. As described in chapter 9, recent changes have placed limits on billing more than Medicare's allowed charge and have increased incentives for physicians to accept assignment and become participating physicians. Currently, physicians are limited in what they may charge on nonassigned claims. Ceilings that in most cases become more stringent over time apply to all nonassigned charges although the ceilings vary greatly in the restraint they require. Such limits include Maximum Allowable Actual Charges (MAACs), limits on charges for overvalued procedures, and the planned ceiling on radiology charges.

Encouragement of participation--that is, of a physician's agreeing in advance to accept assignment for all bills--has replaced Medicare's previous neutrality between assignment and nonassignment. Several incentives favor participation, and their collective strength has gradually increased. Also, while Medicare previously did nothing to help patients find care provided on an assigned basis, it now has instituted policies intended to provide such help as part of the Participating Physician Program (PAR program).

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[1] As in previous chapters, the terms "extra billing" and "balance billing" are used interchangeably to refer to charges exceeding Medicare approved amounts.

[2] Part of this amount consists of assignment for Medicaid beneficiaries and for laboratory services, both of which are required.

Beneficiaries can still choose to be treated by almost any physician (that is, practically all physicians accept Medicare patients), and beneficiary exposure to extra billing for individual services has been reduced by MAACs and other charge ceilings, and by increased rates of participation and assignment. However, largely because of the increased volume of services provided, Part B costs are doubling every four to five years, and total extra billing charges by physicians in 1987 were almost three times as high per beneficiary as a decade earlier.

Medicare's methods of paying physicians have become much more complex for physicians and carriers. New complexities include both changes that apply to all physicians and all charges (such as participation and MAACs) and changes affecting relatively few services, such as the special rules applying to claims for laboratory services and for overvalued procedures.

POSSIBLE IMPROVEMENTS WITHIN THE FRAMEWORK OF CURRENT POLICY

This section discusses possibilities for improvement within the framework of current assignment and participation policy. In line with current policy, the options discussed aim

- to increase participation and assignment rates,
- to increase patients' ability to identify physicians who will treat them on an assigned basis,[3]
- to maintain choices for physicians and beneficiaries, and
- to avoid further increases in Part B outlays.

These reforms within the context of current policy contrast with the more extensive changes discussed in the next section. The limited changes examined in this section generally appear unlikely to yield large results. However, vigorous promotional activities directed at beneficiaries may be an exception, with a possibly larger effect.

Some changes within the current policy framework that are examined here could apply either to all assigned claims or only to claims from participating physicians. A choice between these two applications depends on the relative importance given to increasing the assignment rate as compared with the participation rate. Higher assignment rates mean less beneficiary liability for

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[3] These first two aims may be thought of in terms of helping beneficiaries to limit their exposure to charges above the Medicare allowed charge. In this sense, the assignment process per se--that is, the physician's billing the carrier directly--is not a goal. Physicians willing to accept Medicare's allowed charges, but not to bill the carrier, may be as useful in meeting these aims as physicians who accept assignment or participate. The "second PAR" option, described below, recognizes the potential value of these physicians in contributing to the aim of helping beneficiaries to limit liabilities for charges above the Medicare allowed charge.

billing by physicians above Medicare's approved charge, and there are a substantial number of physicians willing to accept assignment on all or virtually all claims, but not to become PAR physicians.[4] Increased participation is important not only because it increases the assignment rate but also because it aids beneficiaries in finding physicians who will treat them without extra billing. This constitutes an important "insurance policy" in case of major illness, when a beneficiary is likely to incur very large expenses[5] and to need the services of physicians he or she has not used regularly, and whose assignment policy he or she does not know.

A recurrent theme in the changes described in this section is that carriers should provide better services to beneficiaries and physicians and should devote more resources to promoting assignment and the Participating Physician Program. Restricted funding for program administration appears to be a major reason the carriers fail to do so. There are requirements on the books that carriers undertake such activities, but in the current funding climate, carriers seem to undertake only those tasks for which explicit performance standards established by HCFA are in effect. Such standards do not govern the activities in question. Consideration should be given to increasing carriers' budgets for these activities and to instituting performance standards for them.

Provide More Information to Physicians

One proposed change, advocated by some physician organizations, is to help physicians make more informed decisions about participation by providing them full information about each year's PAR program, including payment levels if they participate (that is, their customary charge and the local prevailing change) and limits on charges (primarily their own MAACs) if they do not participate.[6]

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[4] A special tabulation of the 1987 Physicians' Practice Costs and Income Survey, provided by the Office of the Assistant Secretary for Planning and Evaluation, HHS, shows that 6 percent of nonparticipating physicians reported they accept assignment on all Medicare claims and an additional 4 percent of nonparticipating physicians report accepting assignment on 80 percent or more of claims.

[5] Expenses for patients with major illness are particularly high. For example, the 5 percent of Medicare beneficiaries who died in 1976 had Part B expenses that averaged about four times as high as those of beneficiaries who survived for the entire year, some of whom were themselves very ill (Lubitz and Prihoda, 1984).

[6] If there were only a few significant legislative changes in Medicare physician reimbursement each year or the federal budget process were completed before the fiscal year begins in October, it would be easier to provide thorough information at "normal" sign-up time in December. This year, Congress scheduled a second sign-up period (the month of March 1988) because information on allowed charges and MAACs was not available during the normal sign-up period. Providing this information would be much simpler under a fee schedule, for allowable charges would not vary from physician to physician the way they do under the current CPR system.

However, additional information might not change many decisions. Indeed, a sign-up in May 1986, which offered a second chance with more information, produced a negligible (0.1 percent) change in the sign-up rate compared with the preceding sign-up period. Also, increased information--particularly, detailed information on MAACs and prevailing charges--could lead some physicians to raise their billed charges, thereby increasing costs to both beneficiaries and Medicare.

Expand Provider Relations Activities

Expanding provider relations activities seems more likely to increase the participation sign-up rate. In conversations, carrier representatives indicated their provider relations staffs were too small to permit any marketing of the PAR program to small groups or to individual physicians.[7] About half felt they could substantially increase the PAR sign-up rate in their areas through such one-on-one contacts. For many, such activities are an important part of their efforts to increase the number of participating physicians in their private insurance business. A number of the carrier representatives stated that the most promising group to approach consists of physicians with a high Medicare assignment rate who do not now participate. Getting these physicians to participate would produce a relatively small increase in the assignment rate but would aid beneficiaries in finding physicians who accept assignment.

The ability of intensified provider relations activities to increase the participation sign-up rate may differ from area to area. Carriers presumably have some knowledge of the physicians they serve, and about half did not anticipate significant positive results from more intensified provider relations activities. These carriers stated that their sign-up rate could not be increased without an increase in the level of payment to physicians. In particular, carriers with rural service areas expressed this view.

Expanded provider relations activities of a general character rather than ones specifically marketing the participating physician program might also improve participation and assignment rates. Surveys of physicians suggest that many are hostile to Medicare; often their statements suggest that the hostility might have been avoided if information requests and problems had received more attentive responses.[8]

Expand Participation Sign-Up Opportunities

Some carriers suggested that extending the participation sign-up period would increase the sign-up rate, especially since December, the "normal" sign-up month, is a holiday period. However, a major increase in the rate seems unlikely. The November 1986 to January 1987 sign-up, which ran for two and a half months, produced a rate only 2 percentage points higher than the previous

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[7] The Commission conducted a telephone survey of 12 carriers, as described in chapter 9.

[8] The Commission is concerned about the events that give rise to this hostility and will continue to monitor administrative practices for problems that generate unnecessary friction with physicians.

period, and some of the increase probably was due to new incentives to participate that went into effect in 1987. A sign-up period longer than one month is currently precluded by a tight timetable for the period from completion of legislative action on Medicare to the beginning of the PAR period at the start of the calendar year.

Creating opportunities for physicians to shift to participating status throughout the year seems more important than offering a longer sign-up period. Provider relations staffs work year round, and they would be more effective if they could sign up physicians as they work with them rather than the sign-up having to be done by mail, and months later. Also, carriers reported in our survey that during 1987 they had received inquiries from physicians who were sufficiently bothered by MAACs and by the prenotification requirement on high-cost unassigned elective surgery that they wanted to shift immediately to participating status. Thus it seems potentially useful to allow physicians to take on participating status at any time during the year. Beneficiaries could be informed of new participating physicians through a quarterly update to the directory of participating physicians.

Enhance Claims Processing for Participating (and Assigned) Claims

Speedy handling of problem claims and expeditious and effective response to physician complaints about claims problems might increase participation and assignment rates. Surveys by physician organizations cite dissatisfaction with Medicare claims processing as one of the most important reasons physicians do not accept assignment or do not participate. Dissatisfaction, however, may now be less because claims processing times reported by carriers decreased substantially during 1987 and in any case are tightly specified for the future by recent Medicare legislation. Conversations with carriers uniformly found a disbelief that faster claims processing would lead to increases in participation or assignment, although this doubt may reflect views that claims processing is generally timely and effective.

Physician anger may now focus more on the lack of carrier responsiveness to specific claims problems, particularly problems with long delays. In any case, easily accessible and effective carrier service representatives available solely to participating physicians (or alternatively for all assigned claims) could help eliminate one major source of dissatisfaction.

Expanded utilization review, which has been proposed in the President's Budget for 1989, may well reduce participation and assignment rates. Mitchell, Rosenbach, and Cromwell (1987) found lower participation rates where carriers investigated or denied a greater percentage of claims. Expanded utilization review would involve more investigations and, probably, more denials of claims. On the other hand, better review criteria would help focus review on problem areas and decrease unnecessary review and delays.

Give Carriers Responsibility for Billing Patients and Supplemental Insurers

Medicare carriers' assumption of responsibility for billing patients for the Part B deductible and coinsurance and billing supplemental (Medigap) insurers might increase participation and assignment rates. It would also, however, increase Part B administrative costs and would raise troubling issues of collection enforcement.

A physician who accepts assignment has to undertake at least two billing transactions for every claim. He must bill Medicare and he must bill the patient for the Part B coinsurance and the applicable portion of the Part B deductible, if any. (If the patient has supplemental insurance, as most do, a third bill could be involved, although the physician need not become involved in this transaction.) For relatively small bills, the cost of the second billing (including follow up if payment does not arrive promptly) can be a substantial fraction of a patient's liability. The cost and effort of billing twice can be a considerable deterrent to assignment and participation, particularly since physicians often seek payment at time of service on nonassigned claims, thereby eliminating much of the cost of even one billing.[9]

Medicare could relieve physicians of much of the additional billing costs and effort associated with assigned claims. The Omnibus Budget Reconciliation Act of 1987 (OBRA87) provides for Part B carriers to bill supplemental insurers beginning in 1989, which is one step in this direction.

The fullest relief would occur if carriers paid physicians 100 percent of allowed charges on assigned claims and then pursued reimbursement from supplemental carriers and patients for the amounts for which Medicare was not liable. While this would be attractive to many physicians, carriers' workload would increase greatly as would the complexity of their operations. Newly required carrier tasks would include initial billing of supplemental insurers and beneficiaries, follow up, resolution of disputes and claims problems, crediting revenues to physicians' accounts, and completing a financial reconciliation with physicians for amounts not paid by supplemental insurers or beneficiaries. This system might overtax the capability of Medicare's carriers and prove administratively infeasible.

An overall net increase in total processing costs in the U.S. health care system would probably occur because some carrier functions would be new activities (for example, record keeping on revenues to be credited to physicians' accounts and financial reconciliations for these accounts). Much of the increased carrier workload would, however, consist of activities shifted from physicians' offices. And carrier billings to patients and supplemental insurers would piggyback on information flows that already exist. (For example, carriers already send beneficiaries an explanation of benefits form, and could easily and automatically add a section that bills for patient liability.)

Whatever the gains, this system would not reduce billing workload for physicians as much as does a policy of not accepting assignment and requiring payment at the time of service. Thus, its appeal to some physicians who do not accept assignment would be limited.

Medicare might charge physicians for the billing and financial services provided under this system, especially since it would replace some functions currently carried out at the physicians' expense. However, because physicians currently have billing and financial systems that vary widely in method, scope, and efficiency, any system of charges would create losers as well as gainers. Thus charging could have some negative effect on assignment and participation rates.

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[9] On assigned claims, Medicare rules permit physicians to bill patients for their liability at the time of service. However, the physician must still undertake two billing processes because a bill must be sent to Medicare.

Putting such a system into effect would generate a thorny issue of how forcefully to pursue beneficiary liabilities. Some physicians apparently make only pro forma attempts to collect beneficiaries' 20 percent coinsurance and expect to collect little of this amount, while others generally do collect it. Moreover, individual physicians probably behave differently for different bills, depending on patient circumstances and amounts involved. Carriers could hardly pursue such a varied collection policy, and physicians might hesitate to delegate responsibility to carriers in this sensitive area.

Some observers have expressed concern that carrier billing of beneficiaries might lead eventually to collecting amounts beneficiaries owe by taking the funds out of Social Security checks, which are now immune from most debt collection activities--although they are subject to recoupment of overpayments made by Medicare. Others are concerned that the end result would be payment by the federal government of billed amounts patients did not pay, with a resulting increase in physicians' incomes and taxpayers' costs.

Create a Second PAR Program

Physicians who prefer not to deal with carriers for philosophical reasons or because of the heavier claims processing workload might be attracted by a "second PAR" program, in which they agreed in advance to accept Medicare's level of allowed charges as payment in full on all Medicare claims for a year, but directly billed the patient for the entire allowed charge.[10] A second PAR program would permit physicians to bill patients for the entire amount due yet would guarantee patients that the bill would not exceed Medicare's allowed charge.

To the extent that physicians were attracted into a second PAR program because of administrative difficulties with carriers, it would place these difficulties on beneficiaries, who are less well equipped to deal with them than physicians. A second PAR program might also be confusing to beneficiaries and physicians and thus might dilute the overall appeal and effectiveness of participation.

Administering the second PAR program would require Medicare carriers to undertake complex tasks, but these would largely piggyback on existing responsibilities, so that additional administrative workload would be small. Carriers would have to notify each physician of her allowable charge for each procedure. However, carriers already have to do similar calculations as part of the sign-up process for the "regular" PAR program. Carrier monitoring of actual charges that second PAR physicians bill on unassigned claims are similar to their current responsibilities in administering MAAC limits.

The proportion of nonparticipating physicians that would enroll in a second PAR program is unknown, as is the number of PAR physicians who would switch. Surveying physicians on their likely decisions would be the next logical step in consideration of this option.

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[10] The program would require second PAR physicians to fill out all Medicare claim forms for patients in order to moderate patients' paperwork burden and to ensure that Medicare receives the more complete medical information characteristic of physician-submitted claims.

Enhance Beneficiary Education Activities

The preceding options have been oriented toward increasing the attractiveness of participation and assignment for physicians. To the extent they are effective, they would help beneficiaries by increasing the number of participating physicians or the assignment rate. However, improving beneficiaries' ability to find physicians who accept assignment may have more potential for providing financial protection for beneficiaries than do the preceding options. And if beneficiaries more actively seek out participating physicians, physicians concerned about maintaining or increasing their patient volume will have a stronger incentive to participate.

An energetic and imaginative beneficiary education strategy might substantially assist beneficiaries in finding physicians who will care for them on an assigned basis. The following paragraphs describe possible components of such a strategy.

Additional outreach to organizations of senior citizens and disabled persons and to area aging offices might help. Currently, carriers do little outreach, citing their tight budgets as an explanation; HCFA also does little or none. Outreach activities could include extensive contact with senior citizens organizations and area aging offices, aiming to inform them about the PAR program and assignment. Outreach could encourage these organizatins and offices to publicize the participation program and its directory to Medicare beneficiaries in their area, to teach beneficiaries how to request assignment, and to approach physicians and encourage them to participate or at least to accept assignment when it is requested.

Grass-roots organizational activities of this sort may be more effective in reaching and informing beneficiaries and in affecting physicians' decisions than are communications from Washington or from carriers. In particular, the selection of a physician may be affected more by information coming from informal social networks, with which organizations of senior citizens and handicapped persons overlap, than by information from more distant sources. On the other hand, HCFA has a basic responsibility for informing beneficiaries about Medicare, and this responsibility should not be slighted.

Strengthening the message about the participation program that now appears on the explanation of Medicare benefits (EOMB) form for unassigned claims could provide beneficiaries with more information at a time when they are thinking about their out-of-pocket costs. Currently, EOMB forms for nonassigned claims carry a message reading approximately as follows.

> Participating doctors and suppliers always accept assignment on Medicare claims. See the back of this notice for an explanation of assignment.
>
> You can get more information by calling the above [carrier toll-free] number.

A message aimed more forcefully at aiding beneficiaries would

- explicitly name the billing physician;
- state the amount by which his billed charge exceeds the allowed charge and indicate that the beneficiary may have to pay this entire amount out of pocket because other insurance generally does not cover it;

- o indicate that a directory of participating physicians, as well as information on the PAR program, can be obtained at no charge by a call to the carrier;

- o give the carrier's telephone number in the message; and

- o give names, addresses, and telephone numbers of nearby senior citizens' organizations and of area aging offices as other free sources of information on the program.

If increasing participation, rather than assignment, is the preferred policy objective, a message about the PAR program, placed on assigned claims of nonparticipating physicians, might also be helpful.

Finally, as part of a beneficiary education strategy, the Medicare program might put more resources into routine services to beneficiaries--services such as answering questions and disseminating information about the PAR program. Again, budget shortages seem currently to keep carriers from doing this.

POSSIBLE DIRECTIONS FOR MAJOR CHANGES

This section examines more extensive changes in policy designed in accord with the goals of the program as reflected in recent years' legislation. It focuses primarily on general concepts needed to recognize the full range of options available and on broad directions, rather than on specific proposals.

Conceptual Framework

The objective of reducing liabilities for balance billing can vary in at least two dimensions. One is the extent to which bills by physicians in excess of Medicare's allowed charges are limited. In particular, policy goals may be to eliminate balance bills or to limit their size. Current policies include elements of both goals. For example, the PAR program aims to eliminate balance billing for as many beneficiaries as possible, while MAACs and ceilings on charges for overvalued procedures aim to limit extra billing on each nonassigned service. Future policy could embrace either goal or, like current policy, combine them.

The second dimension of variation in objectives is in the scope of services and the population to which financial protection applies. Financial protection might apply to all services for all beneficiaries, as in Massachusetts, where state law requires assigning all Medicare claims. Or it might apply only to those beneficiaries thought to need it most. For example, legislation in Connecticut seeks to eliminate extra billing for low- and moderate-income beneficiaries but not for those with incomes over three to four times the poverty level. (Nationally, about one-third to one-fourth of the elderly have incomes above these levels.[11])

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[11] The 1987 poverty level was $5,447 for an elderly individual and $6,872 for an elderly couple.

Physicians would probably more readily accept charge limits or other measures to increase beneficiaries' ability to obtain services without extra billing if these measures did not cover the entire income spectrum. However, beneficiaries often prefer measures covering all income groups. Measures limited to certain income groups would depart from the long-standing character of Medicare as an entitlement program that does not depend on the beneficiary's income or wealth. Moreover, public benefit programs in the United States that apply only to lower-income populations often carry a social stigma and raise questions about second-class status and poor quality of services for those eligible. Public programs used by all except the most well-off segments of the population probably would fare better than those limited to low-income populations. However, excluding even an upper-income group from the coverage of charge limitations or related measures would create privacy issues with respect to determining beneficiaries' income as well as generate substantial administrative complexities. (Medicare does not have information on beneficiaries' income and there are important components of financial resources outside the scope of information available even to the Internal Revenue Service.)

An exclusion would also raise complex questions of whether Medicare's purchasing power is enhanced or diminished by splitting beneficiaries into two groups. Concern about the quality of service provided to those for whom balance billing was limited would also remain. There is a fear that the best physicians would cease serving this group and concentrate upon the upper-income elderly whom they could charge more.

Alternatively, measures to increase participation and assignment and to increase patients' ability to identify physicians who will provide care to them without extra billing might apply only to those types of services for which such measures appear particularly important. For example, they might apply only to services of hospital-based physicians on the grounds that patients have little or no ability to choose a hospital-based physician who accepts assignment. Often a single group of hospital-based physicians has an exclusive contract with a hospital for services in a given specialty, meaning that a patient or attending physician can exercise no choice. Even where no exclusive arrangement applies, patients rarely have a role in the choice of a hospital-based physician and often do not even know that they received services from some of the physicians who have provided them. OBRA87 provisions requiring charge limits to accompany a to-be-developed radiology fee schedule represent a step in the direction of this alternative.

On similar grounds, measures to assist beneficiaries in obtaining services with limited or no liability for extra billing might apply to other referral services. Because referrals are often made in a time of stress and urgency due to illness, and because the referring physician guides the patient's choice, patients often have difficulty directing themselves to a referred physician who does not bill more than Medicare's allowed charge. However, in some referrals, particularly referrals for elective surgery with no urgency, patients can have more opportunity to choose among physicians. Defining referral services would present problems, particularly since patients often self-refer to a specialist or subspecialist. Similar arguments in favor of charge limits apply to emergency services.

Some recommend limits on charges for all services except office visits. Supporters of this policy offer two arguments for it. First, many patients have an extensive choice of physicians for office visits; visits often involve little urgency and are part of a long-standing relationship that the patient can change if out-of-pocket costs, quality, or other aspects of care are not satisfactory. Second, they claim that Medicare payments for office visits are particularly low, making balance billing more appropriate.[12]

Measures to assist specific beneficiary groups in obtaining services with limited or no balance billing could be combined with measures directed at specific types of services in a variety of ways. Vermont, for example, forbids balance billing of patients with income under $25,000 if single or under $32,000 if a couple, for all services except home and office visits.

Finally, in establishing a conceptual framework, it is useful to distinguish between two broad approaches to reducing balance billing and enabling beneficiaries to obtain care without it. One centers on financial incentives to physicians and beneficiaries; the other, on limits on charges. The following sections discuss these two approaches in turn. Each approach, in its pure form, represents a polar strategy. Future policy, like current policy, could combine them.

Either approach, if successful in reducing extra billing, might increase Medicare outlays. The reduction in extra billing could reduce beneficiary out-of-pocket costs substantially. In 1986, for example, the beneficiary liability on an average assigned claim was $18, just over one third of the $51 average beneficiary liability on an unassigned claim (McMenamin, 1987). With lower out-of-pocket costs, beneficiaries would probably use more services,[13] thereby increasing Medicare Part B spending. Some of the increased care would be appropriate, but some would not.

Approach Centered on Financial Incentives

The core of this approach is to provide beneficiaries a realistic, informed choice between physicians who extra bill for targeted services and those who do not, give beneficiaries an ability to estimate the extra bill, and then leave them to choose. Philosophically, this approach seeks to avoid or minimize administrative or legislative measures that require physicians to forgo or limit balance billing.
To provide beneficiaries a realistic opportunity for choice requires restructuring the current system where beneficiaries cannot select readily from among multiple physicians, including a reasonable number who do not balance bill. A

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[12] Data on Medicare charge reduction rates do not indicate that payments for office visits fall unusually far below charges. Hence, if payments for office visits are in some sense particularly low, it must be because physicians' charges for office visits are low. Data do show that for a variety of specialties physicians bill a much lower amount per hour for care provided in the office than for care in the hospital. Office care may be more subject to competitive market forces for just the reason cited in the text. The lower hourly billing rate for office care does suggest physicians may be less willing to forgo extra billing on office visits than on other services. Introduction of a fee schedule based on resource costs would eliminate this second argument.

[13] See footnote 8 in chapter 9 for the evidence on this point.

critical test for this approach is whether it provides realistic opportunities for beneficiaries to avoid balance billing in situations in which they now encounter particular difficulty in doing so, such as

- o needing services of hospital-based physicians;
- o emergencies;
- o living in rural areas or urban neighborhoods where there are few physicians or perhaps only one; and
- o beneficiaries whose current physical, mental, or emotional status makes it difficult for them to cope well with complicated choices within a complex insurance program. In fact, many would argue that Medicare physician payment is so complex that even most beneficiaries with no special problems cannot effectively master the choices it presents.

In general, solutions for these problem situations are not apparent within the context of an approach centered on financial incentives. Increasing allowed charges in areas with a shortage of physicians should, in the long run, help increase the physician supply in these areas and, in the short run, increase the participation and assignment rates there. However, precisely because few physicians serve these areas, higher allowed charges would not assure beneficiaries an opportunity to choose a physician who does not charge more than Medicare's allowed charge. Similarly, no solution based on financial incentives seems feasible for beneficiaries unable to deal with the complexities of a financial incentive-based system. And, in emergencies, patients are often in no state of mind to choose among hospitals or physicians.

Aside from these particular problems, the approach centered on financial incentives must make two changes to current arrangements to offer beneficiaries what it promises. First, beneficiaries must be much better informed. They must realize they have a choice, understand the financial and other dimensions of that choice, and have the information necessary to make the choice intelligently. The most promising measures to improve information are described above under the heading "Enhance Beneficiary Education Activities." Implementing an approach centered on financial incentive would require undertaking these measures extensively and vigorously.

The second general change this approach would require is to induce enough physicians to participate or forgo balance billing to give beneficiaries a realistic opportunity to exercise choice. A possible measure of the sufficiency of such physicians is the number of participating physicians, by specialty, per 1,000 beneficiaries in a local area.[14] If this measure (or the measure actually used) fell below levels that permit realistic choice, steps would have to be taken to raise it.

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[14] If Medicare's goal were defined not as participation but as elimination of extra billing for some specific set of services or some specific population or a limit--say 15 or 25 percent--on the percentage level of extra billing, then the relevant criterion would be the number of physicians per 1,000 beneficiaries who agreed to bill in accordance with the defined goal. The discussion in the text is written in terms of participation for the sake of simplicity.

These steps might include more vigorous provider relations activities and increasing the differential between amounts paid to PAR physicians and those paid to non-PAR physicians.[15] However, in areas with strong philosophical opposition to participation, such steps might have relatively little effect on the participation rate. If they indeed had little effect, they could hurt beneficiaries in these areas, since the lower fees for the numerically dominant nonparticipating physicians in these areas would probably lead to increased extra billing.

Connecticut is using an alternative means of assuring an adequate supply of participating physicians. In effect, it has placed responsibility for an adequate participation rate on the physician community, with required participation for all physicians as a sanction if the rate does not rise to the target level. This sanction, however, creates a system that comes close to relying primarily on limits on balance billing rather than on financial incentives.

Approach Centered on Limits on Balance Billing

As suggested in the conceptual framework presented above, limits could apply universally or only to selected services and beneficiaries, and could eliminate balance billing entirely or limit it to a percentage of approved charges. Important options not discussed above include the following.

All-or-Nothing Assignment. Medicare might follow the usual Blue Shield model and require physicians to accept allowed charges on all Medicare services--that is, to participate--or to forego entirely direct billing of Medicare.[16] Research on 1970s data suggested this requirement would reduce the assignment rate overall, but one of the researchers (Cromwell, 1987) has suggested the outcome might be different now that the PAR program is in effect and offers advantages to physicians who participate. Almost certainly the participation rate would increase even if the overall assignment rate did not. Because participation offers patients more assurance about the extent of out-of-pocket payments, some would judge that increasing it is worthwhile, even at the risk of some decrease in the overall assignment rate. Clearly the magnitude of any decrease in the assignment rate would affect judgments about the desirability of this option.

All-or-nothing assignment would create losers as well as gainers among beneficiaries, even if it had a positive effect on the overall assignment rate. Beneficiaries who had an established relationship with a physician who previously accepted assignment but did not participate, and who chose not to participate under the new system, might have to pay extra bills or face the breakup of an established doctor-patient relationship. Beneficiaries who had difficulty finding physicians who would accept assignment would be the primary gainers, for some would be able to obtain care from the increased number of participating physicians available under this option.

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[15] Simply raising fees for all physicians would increase Medicare outlays and beneficiary coinsurance and would appear to reward physician communities for low participation rates. On the other hand, raising fees for participating physicians while lowering them for others could be structured to be budget neutral.

[16] The text is written in terms of a goal involving all services, although the possible options include goals involving only a selected group of services.

Eliminating Balance Billing. Medicare might stipulate that to receive any Part B reimbursement, physicians must accept allowed charges for all specified Medicare services provided during a year. Otherwise Medicare would pay neither the physician nor the beneficiary for these services. Physicians would remain free to charge more, but payments would then have to come entirely from non-Medicare sources.

In many ways this arrangement resembles that for private schools in the United States. People may opt out of the public school system, but no public money then goes to pay for the schooling of their children. Similarly, physicians could opt in or out of Medicare each year. Opting in would require either accepting assignment on all Medicare claims (participating) or agreeing to accept Medicare's allowed charges on all claims. Opting out would mean that no Medicare funds would go to a physician or to his patients for his services. A physician who opted out would, however, remain free to care for any and all patients who sought his services, so long as he informed Medicare patients that no Medicare funds would be available to pay for the care he was providing to them.[17]

Proponents of this option argue that it parallels the method the federal government usually uses to buy goods and services; it buys from suppliers who meet its price, and does not purchase from suppliers who do not accept its price. Thus, proponents maintain, this option represents not government price fixing but use of its purchasing power to obtain favorable prices, a normal practice of any large-scale buyer.

Opponents of this option argue that the true buyer is the patient, not Medicare, and that the patient, who benefits from the physician's care, should remain free to pay more than Medicare allows if he or she feels the care is worth the price the physician requests. Opponents also argue that the government should not use its large-scale buying power when purchasing from physicians unless physicians form an association to represent them in negotiating over prices that also brings large-scale market power to bear, much as occurs in most Western nations.

Some express concern that under this option, a substantial number of physicians would cease seeing Medicare patients, thereby reducing Medicare beneficiaries' access to care. Some physicians might indeed stop seeing Medicare patients, depending on their perception of the adequacy of Medicare's payment level; certainly many physicians refuse to see Medicaid patients because of the particularly low payments it offers. However, evidence that physicians who already have agreed always to accept Medicare's prices (participating physicians) have relatively large Medicare caseloads suggests the overall loss of access would not be very large. Nevertheless, there is the risk that beneficiaries would lose access to the physician they had been using because that physician decided not to see Medicare patients.

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[17] This option differs very significantly from the Massachusetts statute, which bars from practice in the state any physician who does not accept assignment. As noted, under this option physicians who did not accept assignment would remain free to care for all patients.

Some also express concern that this option would lead to a deterioration in the quality of care physicians provide to Medicare patients. Financially constrained by the prohibition on extra billing, physicians who saw Medicare patients might hire less skilled office staff, use less modern equipment, and reduce the time they spend with each patient. They might operate two offices, one for Medicare patients that was less desirable in these ways and in its amenities, and the other for other patients.

The effects of this option on quality and access would depend, in part, on how high or low Medicare set its fees and how these fees compared to the amounts paid by private insurers. The balance billing allowed under current Medicare policy serves as something of a safety valve against the deterioration of quality and access that could result if Medicare sets its fees too low and forbids balance billing. Under this option measures to monitor quality and access to care would, therefore, be particularly important.

A variant on this option would retain the principle that Medicare would pay only for services for which physicians did not bill more than Medicare's allowed charges. However, it would allow physicians also to provide higher-priced services to Medicare beneficiaries who were willing to accept such care with the recognition that there would be no Medicare payment made for it at all--neither to the patient nor to the physician. Few would object if physicians cared for a small number of wealthy elderly persons who voluntarily accepted care on a noncovered basis. However, physicians might attempt to deliver much of their care on this basis--for example, providing office visits primarily on a noncovered basis at charges above those Medicare allowed and reserving the acceptance of Medicare's allowed charges for costly procedures and in-hospital care. Such attempts, if widespread, would lead to large increases in beneficiary costs, just the reverse of the objective being sought.

Limiting Balance Billing to a Percentage of Allowed Charges. Another option would require physicians to make an annual decision to "opt in" or "opt out" of Medicare, but would permit physicians who opted in to balance bill on all services up to a certain percentage of the approved charge. (Physicians who "opted out" could charge what they liked during the year, but Medicare would pay nothing for their services, making payments neither to them nor to their patients for their services.) If MAACs were extended indefinitely, they would, together with limits on charges for overvalued procedures, eventually lead to an arrangement much like this option, with 15 percent of the allowed charge being the largest extra bill permitted.

Obviously, this option would leave beneficiaries with some extra billing, unlike the preceding option which entirely eliminates extra billing. This option could reduce substantially the dollar amount of extra billing if physicians did not raise charges on other services to offset income lost from charges that had exceeded the limit on extra billing introduced by the option. At the same time, this option would probably be more acceptable to physicians than the total elimination of extra billing.

Consequences for access and quality would be less under this option than with an outright elimination of extra billing. The limited balance billing it would retain might serve as a safety valve in locations and for services for which Medicare sets fees too low. Thus it could preserve Medicare beneficiaries' access to physicians who otherwise would decide to opt out. Given pressures on the federal budget and the high charge reduction rates in Medicare in recent years, such a safety valve might prove important. However, it could have a perverse effect, insulating Medicare from pressure to set fees at adequate levels.

The balance billing retained under this option would give physicians flexibility that they might especially welcome if they felt there is a subset of patients they wish to charge more than the Medicare allowed charge. Similarly, physicians might especially welcome it in particular instances in which a procedure or service proved particularly difficult to provide (in a way not reflected in billing codes), and they felt an extra charge was merited.

Under this option, the PAR program would continue and Medicare would continue to provide incentives to physicians to participate. Thus beneficiaries desiring to avoid the extra billing permitted under this option would continue to receive assistance in finding physicians who would render care without extra billing. The participation rate might increase as physicians decided the advantages of participation outweighed the attractions of the limited volume of extra billing still allowed. On the other hand, beneficiaries would have less reason to favor participating physicians.

Permitting Balance Billing Only on a Limited Percentage of Services Rendered. Another option would require physicians to accept Medicare's allowed charges on a specified percentage of charges in order to receive any reimbursement from Medicare (and for Medicare to reimburse their patients for unassigned claims). Physicians would be allowed to extra bill on the remaining percentage of services, but would have to inform beneficiaries in advance that they were going to do so. This option would assure some beneficiaries access to every physician without extra billing, while retaining for every physician an opportunity to extra bill.

This may be an attractive solution to problems in geographic areas that have few physicians, for some services would be guaranteed to be available in these areas without balance billing. More generally, like the previous option, its retention of some opportunity for balance billing could be an important safety valve--for example, averting access problems that might arise if Medicare set fees too low in some areas or for some services. This option, too, would be more attractive to physicians than outright elimination of balance billing, while it could do much to assure beneficiaries access to care without balance billing. By allowing physicians to decide when to balance bill, it could be more attractive than options providing them the same total revenues from Medicare patients, but with less choice about how to bill.

From both the beneficiary and physician standpoint, however, the attractiveness of this option would depend largely on the percentage of services on which extra billing was permitted. Unless the percentage were small, beneficiaries might gain little overall reduction in extra billing and, unlike the preceding option, there might not be much of a limit on the amount of the extra bills. For physicians, the prenotification requirement might prohibit extra billing when it seemed most appropriate--in cases in which procedures or services required unusual time or effort. In any case, this option would not target assignment on the neediest beneficiaries or on the services for which assignment is perceived to be most important, and it would be a complex option to administer because it would apply to an average of services (as MAACs did in 1987), not to each service.

IMPLICATIONS OF A FEE SCHEDULE FOR BALANCE BILLING

A fee schedule based on resource costs would change relative payments for different services and relative payments for the same service in different geographic areas. These changes in relative payments would affect participation and assignment decisions by physicians and exposure to balance bills by beneficiaries.

Effects on Physicians

Changes in the overall level of fees probably would have a predominant influence on changes in overall assignment and participation rates. If the fee schedule were budget-neutral--that is, if fee increases and decreases were equal--there would likely be little net change in overall assignment and participation rates.

There would likely be substantial changes, however, in assignment rates for specific services. Physicians would be likely to accept assignment more frequently for those services for which payment levels increased under the fee schedule.[18] Assignment rates probably would decline for services for which payment was reduced under the fee schedule.

A fee schedule might also differentially affect decisions on assignment and participation by physicians in different geographic areas. In areas where the fee schedule generally increased payments, assignment and participation would tend to increase. Where the fee schedule led to a general reduction in payments, lower assignment and participation rates might result.

A budget-neutral fee schedule based on resource costs might produce some increase in assignment and participation rates on average. By setting relative prices to reflect resource costs, the fee schedule would be intended to provide a more rational payment structure that both covers physicians' costs of providing services and increases equity in payment among physicians. If physicians perceived the fee schedule as accomplishing these goals, they might be more inclined to accept assignment or to choose participation.

Effects on Beneficiaries

A fee schedule would also be likely to alter current patterns of beneficiary exposure to balance bills. Even if a budget-neutral fee schedule did not result in a substantial net change in aggregate beneficiary liability for extra billing, changes in individual physicians' assignment and participation behavior would be likely to increase out-of-pocket costs substantially for some beneficiaries and decrease them for others.

Changes in the balance billing liability of individual beneficiaries would vary depending on what services they used, where they lived, and on their previous experience in obtaining services on an assigned basis. A beneficiary would be affected by physicians' changes in assignment practice related to the particular services he or she used. Moreover, the size of balance bills for services with reduced fees could increase as charge reduction rates for these services increased.

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[18] For example, the Commission has heard testimony that allowed charges for chemotherapy drugs do not cover physicians' purchase costs. If fees were raised, assignment rates would be expected to increase by particularly large amounts in situations like this.

In addition, the dollar amount of beneficiary coinsurance would rise for those services with increased payments under the fee schedule and fall for those with decreased payments, whether the beneficiary obtains the service on an assigned or nonassigned basis. These changes in coinsurance would tend to partially offset changes in balance bills.

Policy Issues

The development of a fee schedule requires integration of a number of important design decisions. The effects of alternative design options must be assessed not only for their impact on the structure of the fee schedule, but also for what they imply for policies on assignment, participation, and charge limitations. Policy decisions related to extra billing under a fee schedule are likely to reflect both philosophical and practical considerations. As noted previously, the major policy questions that must be addressed include the scope of services and the populations to which policies to affect extra billing should apply, the extent to which the objective for these populations and services is eliminating extra billing or only constraining it, and the balance between policies using financial incentives and policies using direct limits on charges.

If a fee schedule based on resource costs were thought to make Medicare physician fees more rational and equitable, a policy allowing extra billing might be seen as less appropriate than it is with the current payment system. There might, however, be less need for a change in policy on extra billing if physicians perceived the changes in payment levels under the fee schedule as responding to major problems in the current Medicare fee structure.

Since the fee schedule could reduce payments for some services very substantially, the willingness of physicians to limit their charges for these services to Medicare allowed charge levels might diminish. Even under continuation of current assignment policies, limits on billed charges for services experiencing the largest reductions in payments might be considered desirable to safeguard the beneficiaries most likely to face increases in balance bills. Congressional actions in the past two years to limit billed charges for procedures determined to be overvalued, and thus subject to reductions in prevailing charges, provide a precedent for such policy.

Decisions on whether and to what extent charge limits might be necessary under a fee schedule would depend, in part, on how much the new fees depart from current payment levels and from the payment levels of other payers. Other payers might change their payment systems and levels in response to Medicare changes. Medicare fee levels that are unacceptable to physicians might reduce beneficiary access to services if extra billing were not permitted. Allowing physicians to extra bill Medicare beneficiaries, however, also may reduce their access to needed services because of the extra out-of-pocket cost. Decisions about setting payment levels under the fee schedule and changes in policy on extra billing must take into account their potential impact on the ability of beneficiaries to obtain needed services.

CHAPTER 11 PAYMENT FOR DIAGNOSTIC SERVICES WITH A SUBSTANTIAL NONPHYSICIAN COMPONENT

In the Deficit Reduction Act of 1984 Congress mandated that clinical laboratory tests under the Supplementary Medical Insurance program were to be reimbursed on the basis of areawide fee schedules.[1] Reimbursement levels for tests done in a physician's office were set at 60 percent of prevailing charge levels for an area, and physicians were prohibited from charging for tests performed by an outside laboratory except for a small specimen collection fee.

A number of diagnostic services that appear to be similar to laboratory tests were not included in these provisions and continued to be reimbursed on a CPR basis. Like clinical laboratory tests, these services are relatively routine, require relatively little physician input, are generally administered by nonphysicians, and are often processed by outside suppliers. All of these services have a substantial technical or nonphysician component relative to the physician's input.[2]

The Omnibus Budget Reconciliation Act of 1987 reflects concern with current policies to reimburse diagnostic tests with a substantial nonphysician component, and the incentives they may create. The Act eliminates markups for certain diagnostic services[3], and also directs the Secretary of HHS to review payment levels for some of these services.[4]

As the Commission considers the development of a fee schedule covering all physician services, it has recognized that these diagnostic services, which involve a large technical component and a relatively small physician component, may not fit well into an RVS approach that emphasizes the differences in inputs by physicians. It may be desirable to approach the reimbursement of those diagnostic services by considering the technical and professional components separately, in order to clearly account for the differences in each of the components in different services.[5]

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[1] The transition from areawide to national rates is scheduled for January 1, 1990.

[2] Electrocardiographic monitoring, noninvasive vascular studies, diagnostic radiology, and spirometry are examples of services that fall into this category.

[3] Section 4051 of the Act covers "Elimination of Markups for Certain Purchased Services." The elimination of markups for these services is similar to actions taken to eliminate markups for clinical lab services in 1980 and 1984.

[4] The wording of the provision defining the services to be affected is vague and reveals some of the difficulties in specifying the procedures to be studied. It applies to all tests listed in section 1861(s)(3) of the Social Security Act (that is, all tests), except for clinical diagnostic laboratory tests: in other words, to all tests not already included in the clinical laboratory fee schedule. The legislation also states that "the Secretary is required to review allowances for similar types of diagnostic services which could be performed in physician offices and reduce excessive payments."

[5] The professional component is the physician input required, and the technical component covers all equipment, maintenance, supply, and nonphysician labor costs.

Preliminary analysis has shown that the payment structure for some tests may inaccurately reflect the weight of the technical component. For example, at one carrier the mean global payment for spirometry (CPT code 94010) in 1986 was about $22.00 but the payment for the professional component was about $19.00 implying that the technical component was less than $3.00. Consensus indicates that the two components are more nearly equal, so it may be that the use of combined billing for both professional and technical components has contributed to large distortions in the ratio between the two. This distortion may also increase the difficulty of identifying diagnostic tests for study using the program data, since the true ratio of the two components will be masked.

The Commission will study these diagnostic services to gain greater understanding of the accounting of technical costs and of the relationship of the professional to the technical component, so as to work toward their incorporation into a fee schedule. However, given the widely acknowledged historic subsidization of office visits by diagnostic tests, particularly among primary care practitioners, major reductions in tests should not be implemented prior to changes in the payment for visits.

Because of the similarity between diagnostic services and clinical lab tests, there may be lessons to be learned in reviewing the initial outcomes of the implementation of the clinical lab fee schedule and related policies. For this reason, the chapter begins with a review of the recent experience in establishing fee schedules for clinical lab tests. Then it discusses the issues involved in analyzing costs and payments for diagnostic tests and the application of the analytical results to developing a fee schedule.

REVIEW OF CLINICAL LABORATORY FEE SCHEDULE

Diagnostic tests account for a substantial and increasing portion of Medicare program expenditures. In 1985 diagnostic radiology and diagnostic lab tests accounted for $1.8 billion and $2.05 billion respectively out of $22.2 billion in Part B allowed charges (17 percent of the total).[6] Within diagnostic lab tests, 45 percent of 1985 allowed charges were billed by physicians, 6 percent by hospital outpatient departments, and 28 percent by independent clinical labs. The average allowed charge per test was $12.79 for offices, $26.14 for outpatient departments, and $10.25 for independent labs.[7] Given the large size of these expenditures, recent rapid growth in charges for diagnostic services prompted the establishment of the fee schedule.[8]

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[6] This means all services included under the HCFA type of service code 5, "diagnostic laboratory." (The appendix to chapter 2 lists definitions of HCFA type of service codes.)

[7] Data are from the Five Percent Sample Bill Summary Record System, 1975-85, maintained by the Health Care Financing Administration.

[8] Between 1983 and 1985, average allowed charges per enrollee increased by 23.8 percent for diagnostic radiology and clinical lab tests, compared with only 7.2 percent for medical services and 17.2 percent for surgical services.

The clinical lab fee schedule was initially set at 60 percent of area prevailing charge rates. This level was arrived at by examining the distributions of charges for clinical lab tests and selecting a level that appeared to reflect the costs of efficient suppliers. Efficient suppliers were operationally defined as large independent labs producing high volumes of tests. By setting payments at these levels for all suppliers, Congress hoped to reduce Medicare outlays.

While the fee schedule decreased beneficiary payments to physicians and independent laboratories by an estimated $220 million in its first year, it increased Medicare payments.[9] One factor was the increase in payments to providers whose allowed charges had been substantially below prevailing charge levels. In previous legislation, Congress had given HHS the authority to establish limits on services, supplies, and equipment that did not vary in quality between suppliers.[10] In 1979 HHS designated 12 common laboratory tests to be paid at the lowest charge level limit, defined as the 25th percentile of charges. In addition, other reasonable charge limits had held reimbursement levels well below prevailing charge rates. When the fee schedules were established at 60 percent of prevailing charges, the payments for these services for many suppliers were increased.

Another factor that increased expenditures was an increase in assignment rates. Under provisions of the Deficit Reduction Act of 1984, independent labs were required to accept assignment on all claims, and under the Consolidated Omnibus Reconciliation Act of 1985 (COBRA), this requirement was extended to physician-office labs effective January 1, 1987. Since Medicare has since paid 100 percent of assigned clinical lab claims compared with only 80 percent of unassigned claims, this policy increased Medicare program payments by the coinsurance amount.[11] A third factor, which has not been studied, but which may also contribute, is the effect of reduced out-of-pocket costs on utilization rates.

Finally, a trend that coincided with these policy changes has been an increase in office-based testing (Eisenberg, Pauly, and Myers, 1987), which is estimated by some to be expanding as quickly as 5 to 15 percent a year (Groeninger and Golin, 1987). Some observers believe this trend has been intensified by the recent changes in laboratory reimbursement as physicians attempt to capture the

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[9] The fee schedule legislation required independent labs to take assignment on diagnostic tests. Additionally, beneficiary coinsurance was eliminated for lab services that were billed on an assigned basis, with Medicare directly paying the full allowed charges. A thorough analysis of the impacts of the clinical laboratory fee schedule is presented in General Accounting Office, *Laboratory Fee Schedules Produced Large Beneficiary Savings but No Program Savings* GAO-HRD-88-32, (December 1987).

[10] PL 92-603, Social Security Amendments of 1972, section 224(a).

[11] According to the GAO, the net effect of slightly increased Medicare outlays and significantly reduced beneficiary obligations has been a reduction in average revenues per test for both physicians and independent labs.

revenue that might be lost under direct billing provisions.[12] Additionally, the Medicare fee freeze may have contributed to increases in these services, since traditionally, diagnostic test revenue has been a supplement to office visit fees that have been perceived as low. Overall, both improved technology and reimbursement policy have played important roles in the growth of office-based testing, but the exact impact of each is impossible to estimate.

Congress responded to these expenditure increases by establishing national limits for tests in COBRA 1985. They were to be set at 115 percent of the national median for a test as of July 1, 1986, with a reduction to a 110 percent cap effective January 1, 1988. In OBRA 1987 Congress also reduced payment levels for those tests that had previously been subject to lowest charge level limits, as well as other selected tests.

The clinical lab experience suggests the following cautions in setting fee schedules for other diagnostic tests. First, the volume of office testing will be affected by changes in reimbursement and billing policy. The extent of the effect will depend upon the relative costs of different suppliers and the reimbursement level. Physicians have shown that they will respond to reimbursement incentives in the adoption of new services.

Second, a policy should be developed concerning the desirability of in-office testing, so that reimbursement policy can be set purposefully. This is true particularly since the quality of office-based testing may be inconsistent or lower than that of tests performed in other settings (Belsey, et al., 1987; Eisenberg, Pauly, and Myers, 1987; Kenney, 1987a, 1987b, 1987c).[13] Different medical priorities and thus different reimbursement policy approaches may be applied to different tests or sites.

Third, market distortions, data deficiencies, and changing technology may reduce the accuracy of charge data in reflecting suppliers' costs. For example, high-volume suppliers have lower charges, presumably because they are more efficient than office-based labs. However, physician labs may be able to produce results profitably at costs lower than their current charges because of recent productivity gains. These difficulties may also apply to the pricing of diagnostic services with substantial nonphysician components.

CONCEPTUAL APPROACH TO DIAGNOSTIC TEST REIMBURSEMENT

Payment changes will have an impact on physician and patient incentives. Analysis of these impacts can be divided into conceptual questions of how reimbursement affects providers' and patients' decisions and technical questions of how to determine the underlying costs of a service. This section will address primarily the conceptual issues, while technical issues are discussed at greater length in the appendix to this chapter.

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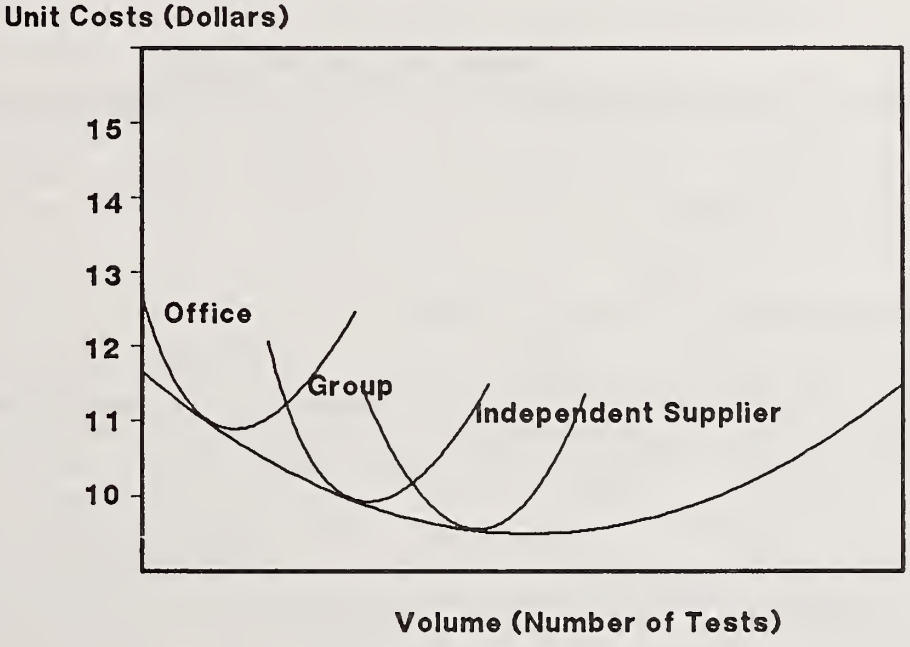
[12] The long-run effects of the implementation on January 1, 1987, of mandatory assignment for physician office tests are not yet known.

[13] Currently, there are no federal certification requirements for physician office labs. OBRA 1987 requires state certification solely for high-volume office labs as of January 1, 1990. However, given the large number of such labs, it may be difficult to develop effective programs to monitor their quality.

In addition to cost, the volume, quality, and access to services could all be affected by the adoption of a fee schedule for diagnostic tests. The setting of payment levels can be used as a cost-cutting tool, but can also be used to encourage wider access, promote quality, and provide incentives to assure appropriate levels of use of services.

The relationships between price, volume, and quality are complex. The effects of a change in reimbursement depend on the underlying costs faced by providers, as well as medical practice patterns. To illustrate the former, if volume and place of service do not greatly affect unit costs of a test, the overall average cost curve (and subsidiary curves for each scale of producer) might look like figure 11-1. The average cost curve for the office supplier is the highest, and at its minimum is about $11.00. However, the low point of the average cost curve for the independent supplier is only one dollar less, so the cost advantage of the independent supplier is small.

Figure 11-1. Average Cost Functions for Different Test Suppliers, Volume Not Significantly Related to Average Cost



The shapes of the curves are determined primarily by the technology of equipment design--that is, how easily equipment can be reduced to a scale usable by an individual practitioner. The flat cost structure in figure 11-1 implies that prices can be set at a low level without significant market effects.[14] The steep cost curve in figure 11-2 implies significant differences in the unit costs of different providers. In this instance, reimbursement at the minimum of the overall average cost curve would discourage smaller suppliers from providing services.

[14] This is similar to using the lowest charge level approach.

Figure 11-2. Average Cost Functions for Different Test Suppliers, Volume Significantly Affects Average Cost

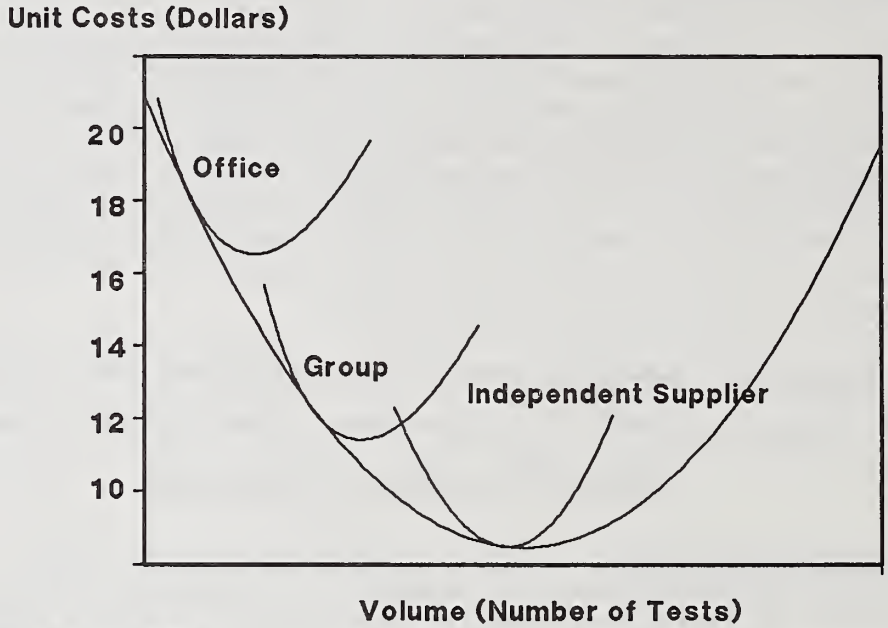


Figure 11-2 describes a different situation, in which costs change more substantially by volume, with a difference between the minimum costs of the office supplier and independent supplier of over $7.00.

Trade-offs Between Price, Volume, and Quality

The scenarios in figures 11-1 and 11-2 are simplified representations of the complicated interactions between price, volume, and site of service. Volume and price interact because, high price levels may encourage a shift in the location of services to offices. Physicians would have an incentive to produce a high volume of profitable tests, whereas an independent lab cannot directly control its own volume regardless of price level.[15] Thus shifting the location of a service to the office may cause its volume to be more responsive to price signals than before. Further, if volume in office-based labs is inversely related to unit costs, physicians may be further encouraged to increase the number of tests ordered.[16]

A shift in the site of testing may also affect quality. For example, physician-office testing may enhance the quality of care by making results available promptly so that they can be correlated better with other information from patient examination, and by reducing the burden on patients for whom mobility is very limited. However, some physician-office testing may be of lower quality

[15] Ability to generate increased volume depends in part on medical practice norms, and on the cost to the patient, both monetary and nonmonetary.

[16] This presumes that a supplier is operating on the downward-sloping portion of the cost curve.

than other suppliers' (Belsey, et al., 1987).[17] So for some tests, widespread availability of office tests may increase beneficiary convenience at the expense of the quality of care. Given the uncertainty regarding the quality of office-based testing, the Commission supports the development of standards for office-based testing and the development of quality assurance programs.

Other trade-offs might occur between cost, quality and access. If reimbursement levels are too low, not only office-based testing, but other facilities may no longer offer certain services, or may reduce quality assurance efforts, reducing beneficiary access and the quality of the tests. The Commission is concerned with striking a proper balance between these trade-offs among cost, access, convenience, and quality. While it may be appropriate to sacrifice convenience in order to maintain cost, access, and quality, the program would have to be monitored to ensure that quality and access would not be compromised.

Each particular pricing decision would depend on the steepness of the cost curve, the cost and quality differences between the different supplier types, and the medical importance of the test. To illustrate how payment decisions might be made, consider the following hypothetical case: A physician's office, a group practice, and an independent supplier all offer the same test. The providers operate at different scales of production, with the independent supplier conducting thousands of tests each month compared with perhaps 100 for the solo practitioner. All may be efficient in the sense that they are using their available inputs (given their different technologies) in the best way possible, yet the independent supplier may have substantially lower unit costs, the group practice somewhat higher costs, and the solo practice the highest unit costs.

If unit costs are close together, then a price could be set to reimburse all suppliers fairly. However, if the unit costs for the test were $10, $15, and $25, for the large, medium, and small-scale suppliers respectively, then a decision would have to be made about whether Medicare would reimburse the costs of only the low-cost providers. One option would be to pay $10 per test, which would discourage office-based testing. If this would reduce beneficiary access, reimbursement could be raised to $15 per test. This would increase access by making the test financially viable for medium-sized producers such as group practices, but would also increase outlays.[18]

Appropriateness of Setting

A related issue concerns the appropriateness of the services provided, both in terms of location as well as volume. For example, it may be possible for a small-scale producer to be efficient and have unit costs as low as those of large producers. However, if the test is of low clinical quality, it may be necessary to take steps to limit the administration of the test in physician offices. On the other hand, certain tests may be more valuable if performed in the office setting, and their administration in that setting should not be discouraged.

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[17] Physicians' offices are more difficult to monitor for technical proficiency in administering tests and maintaining equipment.

[18] There are two options to avoid this kind of overpayment: either the fee schedule could be a maximum, with providers receiving the lower of charges or the fee schedule limit, or multitiered pricing could be adopted, with different payment rates for different scale producers.

Another issue is whether the volume of tests given in order to produce at an efficient level is too high--that is, is it much higher than would be expected in a normal practice under usual circumstances? If so, price levels should not be set high enough to reimburse the small-scale supplier, since this might encourage unnecessary testing. The selection of an appropriate target range or level of use would take both medical norms and technical efficiency into consideration.

Relative Size of Professional and Technical Components

A last general concern is the relationship between the technical and the professional components of the tests under review. As was explained above, the focus of this effort is on diagnostic tests that have relatively large nonphysician components. This implies that a relatively small portion of the total fee is attributed to the professional component. However, there may be instances in which the technical component is also quite small and is overshadowed by the professional component, rendering ineffective the adjustments to the technical component. These cases require additional analysis of the size of the professional component. Is it relatively large because of significant physician input, (and thus should be outside the scope of this analysis) or because, historically, tests were billed in such a way that it is not now possible to accurately determine the separate costs of the technical and professional components?

If it appears that the professional component reflects distortions rather then actual inputs, then the pricing of the test will require additional analysis. However, there are differences between determining the costs of physicians' services and of diagnostic tests, which are essentially nonphysician services. Physicians' services are more human-resource-intensive, and estimating their cost is outside the scope of this inquiry. Instead, those services will be analyzed in the context of the Commission's evaluation of the Harvard RVS study (see chapter 3).

Analysis of the Costs of Diagnostic Testing

There are two basic ways in which we can approach setting the reimbursement level for the technical component of diagnostic tests: a charge-based method and a resource-based method. A charge-based method assumes that by examining the distribution of suppliers' charges, we can identify the suppliers who are efficient and inexpensive and set reimbursement at that level. A resource-based method would calculate the input costs of a test and, based on an analysis of the average cost curve, would set reimbursement at a level that would encourage efficiency as well as an appropriate level of utilization.

In general, the Commission would prefer to set reimbursement on the basis of resource costs, since the values of tests would be free of historical distortions, but it may be impractical to do so because of the extensive analysis that may be needed. If this is the case, a charge-based system (as has been applied to clinical lab fees) may be needed. Some possible approaches are discussed in greater detail in the appendix to this chapter.

Any approach can be used to derive a payment rate for a particular service, but the critical factors are how the payment level relates to underlying costs,

prices and costs of other tests, and the importance of the test in medical practice.[19] Regardless of the method chosen, the resulting fee schedule would be reviewed by expert panels for general sensibility and appropriate relative values.

APPLYING THE RESULTS OF THE ANALYSIS

Once data on input costs become available, they could be used to estimate the unit cost of tests at different volume levels, taking into account the differences between fixed (equipment purchase cost), semivariable (maintenance and repair), and variable costs (disposable supplies). Alternative models may have to be tried if there is easy substitutability among inputs.[20]

A cost model could be used to predict unit costs for a low volume solo practitioner, a higher-volume group practice, or a very high volume independent supplier. At this stage, charge-based information on unit prices could be substituted for cost-based data. If costs (charges) do not vary considerably by volume, it would be simple to set reimbursement levels at the lowest predicted cost levels. But if costs (charges) did vary significantly by volume, decisions would have to be made regarding what would be considered an appropriate volume of tests, and reimbursement could be set at a level that would be too low to support low-volume production.

Once the analysis of the technical component is complete, the results would be subject to adjustment and review before implementation. Just as adjustments will be made to the fee schedule for physicians' services on the basis of a cost-of-practice index, similar adjustments would be made to the costs of practice for diagnostic services. Because of the differences between the professional and technical components of the services, they would be adjusted separately and then combined to calculate a global fee.

Another issue is the development of a methodology to evaluate diagnostic services as technology changes. For some tests, changes in technology or practice style may lead to less physician input, while input for others may increase. Alternatively, technological changes could result in developing more tests that could be administered in physician offices. Criteria should be developed to determine when the nature of a test has changed sufficiently to justify reevaluation.

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[19] Once we have determined, for example, that we seek to set prices at a level that would be high enough to support the expected volume of a group practice facility, then we can approach the technical problem of how to determine that price and under what assumptions of volume.

[20] For example, if two machines can be used to produce a test, one highly automated and self-calibrating but more expensive, while the other is less expensive but requires more labor input, two cost models would have to be developed for analysis.

Finally, after all adjustments are made it would be necessary to submit the proposed fee schedule to expert reviewers who will consider the general sensibility of the plan, the technical component proportion of total fee, the relative payments for comparable procedures, and the assumed levels of volume for each of the tests.

WORK PLAN

The Commission plans to focus its efforts on analyzing BMAD data on current reimbursements for diagnostic tests, including an analysis of the relative sizes of the professional and technical components; identifying services that fall into the category of tests with a substantial nonphysician component; analyzing the costs or charges of a sample of tests; developing interim recommendations regarding the reimbursement for these services before their incorporation into the fee schedule; and developing a plan to incorporate the results of the analysis into the Commission's RVS. The Commission will also review the results of HHS analyses when they become available.

APPENDIX 11

APPROACH TO DETERMINING COSTS OF TECHNICAL COMPONENT

This section briefly discusses methods which could be used to determine the costs of the technical component. One way would be to survey suppliers of tests regarding their input costs and their volume.[21] Using this information, a historical cost function could be constructed, and costs for a particular-sized supplier could be predicted. Another way would be to identify the inputs of a diagnostic test, determine the costs of each of the inputs, and develop a job cost prediction model.

A job costing method of constructing a production function involves several steps. First, all inputs to the test must be identified. Second, all the costs of inputs must be determined.[22] Third, a production function, combining the cost information, would be constructed to predict unit costs of tests at different volumes.[23]

The first method, the use of historical costs to predict the costs of an efficient supplier, would be easier from an analytic standpoint, since costs and volume would merely have to be collected and a cost model constructed without further analysis. However, suppliers may have cost accounting methodologies that may not be comparable. Additionally, there may be suppliers whose cost data does not reflect efficient processes. Nonetheless, this method could be used to produce a good estimate of current costs.

The second method would involve more analytic work, since a "model" process for producing the test would have to be constructed and its inputs priced. One problem with using such a model is that it may not adequately reflect the real complexities of running a diagnostic test. However, this method may still be preferable to the historical cost method. It will not be totally dependent on suppliers' data, and it minimizes the risk of obtaining inflated results if the selected suppliers' historical data reflect inefficiency (which may itself be contributing to the high expenditures for tests).

Identification of Inputs

Identification would require consultation with physicians and other experts. Discussions would cover not only identification of all inputs, but also their substitutability for each other, particularly as the volume of tests changes. The technical component of most diagnostic tests requires the following general

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[21] This is different from a charge-based analysis, which entails historical review of charges. This method reviews historical reported costs.

[22] If there are discounts for high-volume consumption of inputs, these will also be considered.

[23] This is the type of process that many physicians and hospitals currently undergo in making a decision regarding the purchase of diagnostic or other equipment.

categories of inputs: purchase cost of equipment, use of disposable supplies, maintenance and repair costs, utility costs, manpower to administer tests and prepare patients, and the overhead (including space) allocated to the testing equipment.[24]

Determining Costs of Inputs

Determining costs would require investigation not only of purchase costs of various supplies, but also rental costs, discounting arrangements, maintenance contracts, and so forth. Specific comments on each general type of input are presented below:

Equipment. Purchase costs would be identified at several suppliers, including discount arrangements, information on maintenance needs, and expected machine lifetime.[25]

Supplies. Costs of disposable supplies can be obtained from medical equipment suppliers.

Maintenance. Maintenance costs can be estimated in two ways. First, maintenance needs could be estimated based on manufacturer-supplied information, and then these needs could be translated into costs by determining the costs of the predicted maintenance and repair. Another approach would involve examining maintenance histories to determine costs. While this might produce more accurate estimates, it may be difficult to collect this kind of data. If a flat rate maintenance contract is common, a formula can be developed to allocate the costs of the contract on the basis of test volume.

Utility. These costs can be estimated by predicting consumption based on volume and machine specifications.

Manpower. These costs are a more complex issue, in particular because some tests must be administered by a highly trained technician who would not perform other tasks, while other tests may be administered by less skilled technicians who perform other tasks when not administering tests. In the case of a highly skilled technician, input costs per test would be calculated by spreading the entire cost of the technician over the predicted volume, resulting in variation in the unit cost of labor as test volume varies. For less skilled technicians, the average estimated time consumed by test administration could be translated directly into salary costs, with constant unit costs of labor regardless of volume.

Overhead. These costs can be allocated on the basis of space consumed.

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[24] For example, in attempting to produce a production function for spirometry, information on inputs might be obtained from pulmonary physicians, manufacturers' representatives, and those familiar with office and laboratory practices.

[25] Unless data strongly indicate widespread prevalence of rental of equipment, purchase will be assumed, and costs will be annualized according to predicted machine lifetime provided by the manufacturer.

PART II

UTILIZATION, COST AND QUALITY

The Medicare program was established to provide access to high quality medical care for the nation's elderly citizens. Since its enactment, expenditures for the program have risen rapidly, absorbing an increasing fraction of federal revenues and of the GNP. Expenditures for physicians' services have grown particularly rapidly in recent years, requiring increases in the program's support from general revenues and costs to beneficiaries for part B premiums and out-of-pocket costs (chapter 2). Congress has asked the Commission to consider how to control the growth of expenditures as part of its work on reforming physician payment.

Medicare has several features and programs designed to control the volume of services and the prices it pays for them. In recent years, it has expanded beneficiaries' option to enroll in HMOs. Capitation has the potential to reduce Medicare costs, but it is expected to account for a relatively small fraction of Medicare for the foreseeable future.[1] Medicare has also limited the amount paid for hospitalization and for each physician's service. In 1983 the Prospective Payment System was established to pay for hospital services on the basis of prospectively determined fixed prices. Prospective payment for hospital services has introduced effective controls on the price of hospitalization and has provided incentives to reduce per-case costs. Medicare has limited increases in physician charges since 1975; these limits have been tighter since 1984. Finally, beneficiary copayments and utilization review are intended to reduce use of unnecessary services.

Medicare's efforts to control expenditures have often been characterized as reducing inflated charges and cutting fat from the system, but they sometimes increase beneficiaries' financial burdens, and there is concern that they will reduce access to needed services and compromise the quality of care. Our limited ability to measure access and quality makes it difficult to know whether these attempts to control expenditures have eroded them. The Commission is very much aware of this as it considers policies to constrain the growth of expenditures. Indeed, the Commission considers the effects of all aspects of payment policies on access and quality. It plans to thoroughly examine Medicare's ability to assess and ensure access and quality of care during the next year.[2]

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[1] Part III of this report focuses on capitation and discusses how its potential could be realized with less risk of reduced quality of care. The focus of this section is the fee-for-service sector of Medicare.

[2] The absence of a comprehensive examination of these topics in this report does not reflect a lack of concern for access and quality, but rather timing. A comprehensive discussion of quality of care in Medicare has been deferred until the completion of several studies, including those by the General Accounting Office and the Institute of Medicine. Chapter 15 discusses quality assurance in HMOs. Chapter 12 briefly outlines Medicare's current programs for quality assurance for fee for service.

The ability to control expenditure growth through further constraints on the prices paid for physicians' services is limited by the potential for physicians to shift the burden of charge reductions to beneficiaries through balance billing, the concern that access and quality will be reduced, and the possibility that price reductions will be offset by increases in the volume of services.[3] An analysis of recent growth in part B expenditures indicates that increases in the volume of services have played a major role (chapter 2). Efforts to control costs in the fee-for-service sector must concentrate on controlling increases in the volume of services.

Medicare's current programs do not constitute an effective strategy to control growth of the volume of services without risk of reducing quality of care. An effective strategy must reduce services expected to provide the least benefit to patients without reducing more beneficial services. It will require three elements. First, Medicare beneficiaries and their physicians must be willing to forego services of little or no benefit. Second, there must be effective mechanisms to give physicians, patients, and others making decisions to use services both the means to identify services of little benefit and the incentive to reduce them. Third, we must have greater knowledge of the effectiveness of services in order to determine which services are least beneficial.

WILLINGNESS TO REDUCE SERVICES OF LITTLE BENEFIT

Few beneficiaries would object to eliminating services expected to have no benefit for them. However, elimination of these services may not be enough to achieve control of the growth of expenditures. If not, it would be necessary to identify and reduce services that have some small physical or psychological benefit but substantial cost. It is not clear that Medicare beneficiaries or their physicians--or society as a whole--would be willing to support efforts to reduce these services.

There are many examples of medical services that have a positive but very small chance of benefiting a particular patient. For example, a patient with an ordinary headache has a remote chance of having a medical problem that would require surgery. A magnetic resonance imaging scan could identify that rare patient, and the patient would benefit. But the chance is very small, and the total expenditure would be very large if all patients with headaches were to be scanned. Similarly, large amounts of resources are expended for terminally ill patients with only a very small chance of benefit.

Still, patients, their families, and their physicians are reluctant to forego that chance, however small. Our reluctance may come in part from a fear that we

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[3] A Medicare fee schedule for physicians' services would rationalize relative fees and decrease the financial incentive to provide one service instead of another (chapter 3). This may reduce use of services that were previously overpaid, but cannot be expected to markedly slow aggregate growth in the volume of services.

on them further to reduce unnecessary services. If patients and their physicians could more confidently determine the benefit each service would provide, copayments would be less likely to threaten quality because patients would not inadvertently forego beneficial services.

Utilization review is also designed to selectively reduce unnecessary services, but its contribution to controlling costs has been small in part because of limited ability to identify which services are unnecessary. Chapter 12 discusses the current performance of utilization review in Medicare and suggests that improved clinical criteria are needed to allow better discrimination between services that are beneficial and those that are not.

Physicians either make or influence most decisions to use services, and must therefore take collective responsibility for the wise use of the resources available for medical care. Chapter 14 introduces one means by which this collective responsibility can be made more apparent: expenditure targets. The intent of expenditure targets is to make explicit to physicians that there are in fact limits on the resources that society makes available for medical care, and to give them a collective incentive to moderate the rate of growth of expenditures by reducing services of least benefit. Expenditure targets may be a better means of encouraging the wise use of resources than other methods that intrude on physicians' clinical decisions. If physicians are to respond constructively to expenditure targets by supporting improved peer review, using practice guidelines and comparative utilization data, they must have the information to identify and reduce services of least benefit.

IMPROVING KNOWLEDGE OF THE EFFECTIVENESS OF SERVICES

Knowledge of the effectiveness of services must play a pivotal role in reducing growth of expenditures without compromising the quality of care. With that knowledge, physicians and their patients could reduce services that provide little benefit and could more confidently weigh those benefits against costs. Utilization review and coverage decisions could be made more accurate by improving the clinical criteria upon which they are based. They would then consistently reinforce appropriate medical decisions. And physicians could respond more constructively to collective constraints on the use of services.[6]

Information about effectiveness of services can be improved through clinical research, development, and evaluation (see chapter 13). There is no question that expanding our knowledge of effectiveness of services is needed. There is a compelling need for a much greater effort to evaluate both existing and emerging medical practices and techniques. In addition, existing knowledge must be made more easily available to physicians, patients, and others making decisions that influence the use of services. This report focuses on that task. Chapter 13 examines two promising ways to do that: providing physicians with comparative utilization information and practice guidelines.

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[6] Managers of prepaid care would also be able to structure constraints on behavior of enrollees and incentives for physicians if they had better knowledge of their effects on efficiency and quality of care in the HMO.

do not yet have the means or knowledge to selectively reduce services of small benefit--that inevitably patients will also be denied needed services. It may also reflect the fact that we have not been forced to choose between further rapid increases in taxes and beneficiary costs and reductions of at least some services with marginal benefit. Even if the choice were clear, Americans might be reluctant to forego any medical service with some potential for benefit, no matter how small.[4]

Yet society's resources are limited, and physicians, patients, and their families must accept collective responsibility for their use. The challenge is to translate a collective responsibility into individual accountability, and to do so in a way that any services foregone are those of least benefit.

MECHANISMS TO REDUCE SERVICES OF LITTLE BENEFIT

Medicare has relied on two methods intended to reduce services of little benefit in fee for service: beneficiary copayments and administrative measures such as utilization review and policies on the extent of coverage. Neither is considered to be effective in limiting expenditures without risk of reducing beneficiary access and quality of care.

Though insurance protects beneficiaries from the full financial consequences of illness, copayments are intended to reduce demand for services by requiring patients and their physicians to balance a fraction of the costs of services against the benefits. However, most Medicare beneficiaries are not subject to copayments because they have private supplementary insurance or Medicaid. Patients and their physician-agents thus have an incentive to seek all services that may provide them benefits greater than the risks with little regard for costs.

When copayments do reduce the use of services, they may also reduce some beneficial as well as unnecessary services, particularly for the poor, many of whom are not eligible for Medicaid, and those who have large medical costs, such as the chronically ill.[5] Consequently, policymakers are reluctant to rely

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[4] Though we are reluctant to deny a particular potentially beneficial service to an identifiable individual, Americans are willing to collectively forego a potentially beneficial service. There are substantial gaps in coverage of beneficial services, particularly for Medicaid. For instance, we collectively forego prenatal and infant care services that would be expected to have benefits much greater than costs, though we are reluctant to deny an organ transplant to a particular individual.

[5] Twenty percent of the elderly have neither Medicaid nor private supplementary insurance. Medicaid pays the deductible and copayments for Medicare beneficiaries who are eligible, but just 8 percent of the elderly have Medicaid, and only one-third of the elderly below the poverty line are eligible for Medicaid. As described in chapter 2, for beneficiaries with small incomes and no supplementary insurance, the financial liabilities from Medicare copayments and balance billing can be a substantial financial barrier to care.

CHAPTER 12 IMPROVING UTILIZATION REVIEW IN MEDICARE

From Medicare's inception, Congress intended that the program reimburse only medically necessary care for covered health services. Utilization review exists to help realize this goal.[1] The objectives of utilization review are to control costs by eliminating payments for unnecessary or inappropriate care and to promote improved standards of medical care through clinically credible and administratively reasonable processes of review.

The 1980s have seen substantial improvements in Medicare utilization review. Congress has restructured the review of hospital services under statewide Peer Review Organizations (PROs), and HCFA oversight of the utilization review activities of PROs and Part B carriers has become more systematic. Still, as demonstrated in chapter 2, the costs and volume of care continue to increase rapidly.

This chapter begins with an overview of current Medicare programs to control inappropriate use of medical services. A summary of utilization management in the private sector follows. Drawing on these discussions of public and private review strategies and problems, the final section suggests future directions for Medicare. These include

- comprehensive assessment of utilization review in Medicare to lay the foundation for a long-term research agenda and for more systematic, clinically informed oversight of the quality and effectiveness of current programs;
- expansions and refinements in the scope of review activities with specific attention to review of outpatient care, preservice review, and high-cost case management; and
- more productive use of limited budgetary and administrative resources available for review.

Expectations about utilization review should be realistic. Program credibility can be strengthened, limited resources can be more productively focused, and payments for inappropriate care can be further limited. Nevertheless, improved review is unlikely to reduce dramatically the rates of increase in Medicare costs and use. Powerful financial, legal, ethical, and technological forces will continue to press costs and use higher. Moreover, medical necessity review, like medical care itself, will not be a precise science for the foreseeable future.

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[1] In this discussion, utilization review refers to the scrutiny of services delivered by a health care practitioner or provider to determine whether those services were medically necessary and appropriate. Review may be performed by peers within a health care organization or by entities not directly involved in service delivery. This definition encompasses the activities of carriers, fiscal intermediaries, and PROs and ignores Medicare's usual labels of utilization review for hospital services and medical review for physician services. Utilization review generally focuses on potential overuse or misuse of services, not underuse, and considers whether the site of service as well as the type of service is appropriate.

Research is shrinking the boundaries of uncertainty about appropriate care (Wennberg, 1988), but methodological, financial, and political obstacles to rapid progress are still significant (Eddy and Billings, 1988).

CURRENT MEDICARE POLICIES

In the past several years, Congress and the administration have adopted policies to reduce the rate of increase in Medicare outlays. Some policies, such as prospective per case payment for hospitals (PPS), limit government liability for both price and utilization increases. Other actions aim more narrowly to control either the unit price or the number of units provided. Freezes on physician fees fall in the first category; utilization review falls in the second.

Unit price controls are relatively simple to design and implement. Unfortunately, they may sometimes achieve desired constraints on fees only to stimulate partially offsetting increases in volume. This possibility helps explain both the continuing interest in per case and capitated methods of paying physicians and the ongoing search for more direct mechanisms of volume control to supplement reforms in fee-for-service payment.

The following discussion covers Peer Review Organizations and Part B carriers, the two organizations most involved in the review of physician services for Medicare beneficiaries.

Peer Review Organizations

As part of the transition to hospital prospective payment, Congress required that hospitals contract with designated "utilization and quality control peer review organizations" (P.L. 97-248 and P.L. 98-21). These organizations review the necessity, appropriateness, and quality of care provided to Medicare beneficiaries. Although linked to hospital payment, PROs necessarily examine physician decisionmaking since physicians decide who is admitted to the hospital and how long a patient stays.

When Congress created the program, it assigned all responsibility for reviewing the medical necessity of inpatient hospital care to the PROs. The fiscal intermediaries who process Part A and some Part B claims (for example, for outpatient hospital care) conduct other checks and reviews of hospital claims related to coding, eligibility, and coverage. Also, these organizations still review the medical necessity and the quality of most care provided by home health agencies, skilled nursing facilities, and hospices. This report will not further discuss the intermediary role in utilization review.

Funding for PROs comes primarily from the Hospital Insurance Trust Fund with some support from the Supplementary Medical Insurance Trust Fund. Congress initially provided a funding floor for hospital review activities and subsequently required the Secretary of HHS to fund other activities at a level sufficient to cover costs. Funding for fiscal year 1988 is $191 million.[2]

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[2] An excellent summary of PRO history and program features is provided in a recent report by the Congressional Research Service (October 1987).

Contracts. HCFA selected the first set of PROs--one per state--based on competitive bids for two-year, fixed-price contracts. Several PROs hold contracts for more than one state. Congress requires that organizations sponsored by physicians be favored in the selection process and that in-state bidders be given preference over out-of-state organizations. The Omnibus Budget Reconciliation Act of 1987 has extended the contract term to three years.

HCFA has taken a very strong role in setting priorities for PROs. The scope of work for the first contracts, those for 1984-86, emphasized the detection of hospital efforts to evade PPS constraints--for example, by increasing the number of admissions or selecting diagnosis codes to maximize revenue. During the second contract period, 1986-88 objectives for quality of care have become relatively more important. These responsibilities and other policies employed by Medicare to protect quality of care are briefly reviewed in the appendix to this chapter.

In the third contract cycle, 1988-90, PROs will expand review to ambulatory surgery centers. Limited reviews of quality of care will be initiated for outpatient hospital, skilled nursing facility, and home health care. Beginning in 1989, HCFA will conduct pilot studies on the review of care in physicians' offices. (Review of services in HMOs is discussed in chapter 15.)

Within the next two years, PROs will begin to study small area variations in the use of hospital care. HCFA is funding the development and distribution of the necessary data and analytic software, and a subset of PROs will receive technical assistance from the American Medical Review Research Center. The objective is to help PROs better target their review and educational efforts.

Utilization Review Activities. PROs review care both prospectively and retrospectively on a case-by-case basis.[3] They also analyze aggregate patterns of care. Reviewers use criteria adopted by each PRO (as required by law). These criteria vary considerably in scope and specificity, although many PROs appear to build on a few widely used sets of review criteria (General Accounting Office, July 1987; Project HOPE, 1987).

HCFA currently requires that each PRO review all proposed pacemaker insertions before a patient is admitted to a hospital. PROs must also select four other elective inpatient or outpatient procedures for 100 percent prior review. These reviews may consider whether inpatient care is needed and whether the procedure itself is medically necessary.

The Consolidated Omnibus Reconciliation Act of 1985 (P.L. 99-272) requires PROs to do prior review for at least ten elective procedures, but implementing regulations have not yet been issued. As part of this process, PROs will be able to require second opinions when their reviewers are unable to make a clear judgment about the need for a proposed procedure.

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[3] PROs use claims information supplied by fiscal intermediaries to identify cases and select samples for review. PROs then request the corresponding hospital medical records for on-site or PRO office review.

In addition to the required prospective reviews, the necessity of hospital admissions is also evaluated retrospectively for all cases selected by PROs to meet other HCFA requirements for utilization and quality review. These other requirements include selective review of readmissions to hospitals, transfers of beneficiaries from one facility to another, and cases that qualify as day or cost outliers by exceeding PPS defined norms. PROs must also review a 3 percent sample of all discharges of Medicare patients.

For the 1984-86 contract cycle, required reviews covered more than 40 percent of hospital discharges for Medicare beneficiaries. HCFA designed the 1986-88 scope of work to reduce this proportion, but individual case reviews still cover approximately 25 percent of Medicare discharges.

PROs review aggregate patterns of care as well as individual cases. Following HCFA protocols that focus primarily on potential problems in quality of care, they create profiles based on hospital claims data, identify aberrant facilities and practitioners for further investigation, and, as appropriate, initiate remedial actions such as education, intensified review, and financial penalties.

PROs can deny payment for hospital services judged medically unnecessary or not delivered in the appropriate setting. Only PRO physicians may authorize such denials, and only after the attending physician has been given the opportunity to discuss the case. Nurses perform the initial assessment of cases based on written criteria and may approve payment. (In 1986 Congress authorized PROs to deny payment for substandard quality of care. No implementing regulations have been issued yet.)

Evaluation of PRO Activities. HCFA's evaluation of PROs' performance has focused on their compliance with the requirements of their contracts. Partly because the program is still new, its overall effectiveness in meeting objectives for cost containment and quality of care has not yet been comprehensively assessed. It has, however, been the subject of numerous hearings, reports, and other investigations.

Roughly half the original PROs failed their evaluation by HCFA for the 1984-86 contract period. The most common problem was failure to take action on problems they had identified with the quality of care provided by specific hospitals or physicians. Where PROs failed, contracts were opened for competitive bids. Six PROs were replaced at this stage; three had been replaced before the end of the first contract. Those that passed HCFA's evaluation were automatically renewed for the second contract cycle. Evaluation for the second contract cycle is being phased to accommodate the legislative extension of contracts from two years to three.

In addition to this formal evaluation of contract performance, HCFA regional offices monitor PRO activities on an ongoing basis. HCFA assessment of their performance in utilization and quality review incorporates findings by a private contractor, Systemetrics. This contractor, the so-called SuperPRO, is charged with auditing samples of each PRO's decisions on individual cases. The SuperPRO performs blind reviews of samples of cases, then compares its findings with those of the PRO and forwards the results to HCFA. Data reported to HCFA show that PROs are considerably less likely than the SuperPRO to find hospital care inappropriate, in part, because their reviews are less intensive and in part because they take into account social factors such as unavailability of nursing or home care.

Carrier Utilization Review

Carriers are private contractors who administer payment of Part B claims. There are currently 36 carriers contracting with HCFA on a cost basis to process claims in 56 geographic areas.[4] At this time all carriers are organizations that underwrite and administer private health insurance programs.

One responsibility of carriers is to review the medical necessity of care provided to Medicare beneficiaries. The fiscal year 1988 budget allocates $63 million for this activity, approximately a tenth of total carrier funding. Unlike PROs, carriers have no explicit role in reviewing quality of care, although medical review may improve quality by discouraging excess or inappropriate care that exposes beneficiaries to harm. Also unlike PROs, carriers' reviews concentrate on examining of claims rather than medical records.

Prepayment Review. During the processing of Part B claims, carriers screen claims before payment to catch such potential problems as unnecessarily intense or frequent care. This initial screening is generally automated, that is, built into the claims-processing software. Some claims are automatically denied--for example, a hysterectomy for a male or for a woman with a past claim for the same operation. Other claims that fail the initial screens are manually reviewed.

Take one screen on frequency of hospital visits as an example. If a physician submits claims for more than 30 hospital visits to a beneficiary within a 31-day period, the carrier will suspend processing of claims for the 31st and subsequent visits. Carrier staff will look for documentation of medical necessity in the suspended claim or the beneficiary claims file. Occasionally, the physician or facility may be contacted for additional information, such as medical records, to help determine whether the questioned visits were appropriate. Depending on that determination, a claim may be paid in full, paid in part, or denied. Practitioners can appeal these decisions.

Prepayment reviews focus primarily on office services, visit categories, and durable medical equipment. Some of the review screens are required by HCFA, such as the hospital visit screen described above. Other screens are discretionary, that is, they are designed by individual carriers to deal with local concerns. One carrier, for instance, suspends physician claims for more than six extended hospital visits per single inpatient stay of a beneficiary. In fiscal year 1988, HCFA is requiring carriers to apply thirteen medical review screens.

HCFA staff examine the discretionary screens developed by carriers to determine whether some would likely be cost-effective for nationwide application. Carrier technical advisory groups also periodically discuss discretionary and required screens with HCFA staff and make suggestions for additions and deletions.

Postpayment Review. In addition to claim-by-claim review before payment, carriers also analyze claims data after payment, aggregating information by several practitioner and supplier categories. HCFA requires further examination of practitioners and suppliers who provide particular services more frequently than 97 percent of their peers.

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[4] HCFA also administers few fixed-price contracts arrived at through competitive bids.

Unless internal information is sufficient to explain aberrant patterns, carrier representatives will discuss their findings with individual practitioners or suppliers and inform them about how their billing and practice patterns compare to their peers. In serious cases, physicians or suppliers may be subject to prepayment review of 100 percent of their claims. The carrier may also seek recovery of identified overpayments. When fraud is suspected, cases are referred to the Inspector General of Health and Human Services for further investigation.

Postpayment review is also triggered when the fiscal intermediaries who process Part A claims notify carriers of utilization problems identified by them or by PRO review of Part A services. Carriers then determine whether claims for physician services should be paid or denied when hospital services have been judged inappropriate.

Evaluation. In the late 1970s, HCFA established the Contractor Performance Evaluation Program (CPEP) to evaluate fiscal intermediaries and carriers across a broad range of required functions. As noted in last year's PPRC report, HCFA is trying to focus more on results, although process evaluations remain quite detailed.

Carriers are required to report numbers of claims denied and dollars saved through their medical review activities. CPEP standards have required each carrier to achieve an overall return of $5.00 for every $1.00 allocated for medical review. Returns for prepayment review tend to run nearer to $10.00 to $1.00, and the effort appears to be cost-effective at the margin and overall. In fiscal year 1988, carriers reported total savings from medical review of over $680 million, more than 90 percent of which came from prepayment review.

For postpayment review, the net amounts directly recovered from practitioners and suppliers are relatively small. The process is labor- and time-intensive, and savings ratios less than two to one are not uncommon. It is important to note that these ratios do not reflect

- the value of postpayment review in suggesting productive targets for prepayment screens;
- the direct savings from 100 percent prepayment review of aberrant providers (approximately $33 million in denied claims in fiscal year 1987) who were identified through postpayment review;
- the impact of carrier feedback to physicians who have atypical billing and use patterns;[5] or
- the deterrent effect of review, a common methodological problem in evaluating any utilization review programs.

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[5] A study of Blue Shield of Pennsylvania found sustained decreases in billed charges per subscriber for high-use physicians who received comparisons of their utilization rates with those of their peers. The authors suggested that it was not just information, but information combined with the potential for follow-up audits and financial penalties, that accounted for the program's impact (Schwartz et al., 1987).

Problems with Utilization Review in Medicare

Four issues dominate discussion of PRO and carrier activities in utilization review.[6] They involve

- the need for systematic assessment of the clinical soundness and effectiveness of the review criteria currently used by PROs and carriers and, focused research to develop more efficient and effective criteria and tools for the future;
- the limitations of current evaluations of PRO and carrier performance;
- the need for improved communication with community physicians; and
- the difficulties of effectively administering utilization review with limited funds, rapidly increasing claims volume, and tight timetables for paying providers.

Review Criteria. Despite considerable variation in the scope and specificity of the review criteria used by PROs and carriers, HCFA has not undertaken a systematic comparative assessment of the clinical soundness and effectiveness of these criteria.[7] Nor has it assumed an active research and development role to make new criteria and techniques available to contractors.[8] As a result,

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[6] Studies by the General Accounting Office and the Office of the Inspector General in the Department of Health and Human Services have been helpful in identifying problems with PRO and carrier activities. See, for example, General Accounting Office, February 1983, April 1986, July 1987, and October 1987. Additional studies are currently under way. Both the GAO and the HHS Inspector General are looking at aspects of carrier utilization review. A separate GAO study, which focuses specifically on quality assurance in Medicare, will contain recommendations on data collection, knowledge development, and structure of HCFA and contractor activities (General Accounting Office preliminary report, July 1987). Additional recommendations are expected from an Institute of Medicine study being undertaken for the Department of Health and Human Services.

[7] The agency did require the SuperPRO to examine criteria used by PROs to make determinations of medical necessity for a set of six medical conditions and to report on those it considered outdated or otherwise deficient. Other criteria were not examined.

[8] HCFA has circulated the various medical necessity guidelines developed by the American College of Physicians, the Blue Cross and Blue Shield Association, and others. It also reviews carrier discretionary screens for programwide application and encourages contractors to share information about their programs and results. These activities, however, do not constitute a significant R&D effort.

local review organizations are left to make expert judgments in adopting, developing, and modifying review criteria with limited national guidance and leadership on state-of-the-art strategies.[9]

The situation is complicated by the fact that much of the work to develop review criteria and associated computer software to make their application efficient and practical is proprietary. The firms sponsoring this R&D work understandably tend to be reluctant to subject their efforts to full scrutiny by potential customers as well as potential competitors.[10] These circumstances make stronger leadership for PROs and carriers in criteria development and assessment particularly important, albeit more difficult.

Performance Evaluation. Much attention is now focused on PRO activities to protect quality of care. This interest is legitimate, reflecting reasonable criticisms that cost containment was too dominant an initial emphasis. Nevertheless, concern about the effects of PROs on excess use and excess costs is still warranted.

HCFA faces several problems in evaluating PROs. First, they are moving targets. Their responsibilities have changed considerably during the relatively short history of the program. Second, the scope of work on which they are assessed is so cumbersome (for example, in requiring that one-quarter of hospital discharges be reviewed) that it undermines the efficient and effective targeting of review efforts. Third, since the criteria used by PROs are not systematically evaluated, there is no process to help them identify imprecise review criteria that decrease the efficiency of nurse reviewers and result in unnecessary and expensive referrals of records to physicians.

Final evaluation of individual performance for the second contract cycle (1986-88) will be delayed for many PROs because of the contract extension required by OBRA 1987. The phasing in of new contracts, while advantageous in a number of respects, makes individual and overall judgments of current PRO performance in utilization review more difficult.[11]

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[9] HCFA has sponsored some relevant assessments, for example, of systems for rating the severity of the illness of hospitalized patients. Also, HCFA has available to it assessments of some criteria sets for utilization review, primarily the Appropriateness Evaluation Protocol which was developed in the 1970s to assess the need for hospital care (Payne, 1987).

[10] Many leaders in the development of clinical practice guidelines and review criteria are now involved with these firms. This creates potential problems of conflict of interest if HCFA uses these individuals as evaluators of other organizations' work.

[11] In a 1987 report, the GAO identified some administrative problems with HCFA's evaluation of PRO performance (General Accounting Office, October 1987). These problems included lack of timely identification of performance problems, inadequate procedures to ensure consistency in the evaluation process, improper application of HCFA instructions by evaluation panels, and insufficient documentation of bases for decisions. HCFA made or agreed to make most of the suggested changes.

With respect to carriers, the Commission's 1987 report noted that they felt they could achieve greater overall savings for Medicare if they had more flexibility in directing their resources to areas with the highest potential for total savings in their geographic area. Medical groups have strongly criticized the use of inflexible savings ratios, such as the current five-to-one requirement for medical review, as an incentive to inappropriate denials of claims (American Society of Internal Medicine, 1988; Medical Group Management Association, 1988). Use of savings ratios as performance standards could theoretically be a problem where inappropriate use has been reduced to a level that produced few denied claims. This has not yet been documented as a practical problem.

One additional concern about the effectiveness of Medicare utilization review programs involves coordination. Currently, HCFA does not require carriers and PROs to regularly share information about the utilization problems they identify. By sharing information on aberrant practitioners, carriers and PROs could reinforce each other's efforts and more quickly identify serious problems. Coordination is not cost-free, however, and might take resources away from other important activities unless additional funds were provided.

Communication with Physicians. The credibility of utilization review is affected not merely by the clinical content of review criteria but also by the way PROs and carriers relate to area physicians. For example, PROs have been criticized for weak communication about the utilization problems they have identified. In partial response, OBRA 1987 requires them to report to providers and practitioners at least twice a year on what kinds of care they have determined to be unnecessary or below professionally recognized standards. These reports could be helpful, especially if the rationales behind the determinations are persuasively explained and the data clearly presented.

A crisis in communication involving carriers was triggered early in fiscal year 1988 during implementation of OBRA 1986 provisions on unassigned claims that are denied or reduced for lack of medical necessity. When such denials occur, physicians may now be required to make refunds to affected beneficiaries. Physician groups have criticized implementation of this provision on several grounds--poor phrasing of the letters notifying physicians and beneficiaries about denied claims, absence of opportunities for physicians to respond to decisions before beneficiaries are notified, and failure to separate medical necessity denials from denials for uncovered services. While it examines long-run options, HCFA has instructed carriers to request and consider additional information from physicians before denying an unassigned claim for lack of medical necessity. Carriers will have to absorb the estimated $10 million that will be required to implement these instructions.

HCFA does not require that carriers consult with area physicians in developing review screens. Although carriers generally do use practicing physicians both for advice on review policies and for assistance in reviewing specific cases, some have argued that HCFA should require a more formal process of consultation (American Society of Internal Medicine, 1988). One step in the right direction is HCFA's proposal that all carriers employ a physician to serve at least half-time as medical director (most already do). That physician is to be responsible for evaluating and recommending review targets and for developing criteria to guide judgments about the medical necessity of services. The medical director will also serve as a focal point for communicating with area physicians. However, carriers will still have limited resources for explaining their criteria and processes to the medical community, and they are not, like PROs, required to report generally to area physicians on problems they have discovered.

Funding and Claims Processing. The case has been made repeatedly by GAO and others that Medicare claims processing is underfunded. Critics contend that administrative dollars spent on claims edits and reviews generally pay for themselves many times over in benefit dollars saved. Congress has earmarked funds for medical review in recent years, but funding has not kept pace for other claims processing activities, such as coding edits, that also contain benefit costs.

As noted in the Commission's 1987 report, the impact of tight funds for claims processing has been exacerbated by the rapid and underprojected growth in Part B claims, a growth forecast at 16 percent for fiscal year 1988 and 9 percent for fiscal year 1989. As carriers struggle to process this increased volume without corresponding increases in resources, they may eliminate their discretionary edits and pay questionable claims that would otherwise have been suspended for investigation. The result is higher benefit outlays. In addition, the dissatisfaction and confusion that results from an overloaded claims processing system may undermine confidence in carrier policies generally. Poor performance by carriers in responding to telephone and written inquiries by beneficiaries and physicians is a case in point (American Society of Internal Medicine, 1987).

In addition to resource and workload problems, carriers now have less time to complete claims reviews. OBRA 1986 established progressively lower ceilings for processing clean claims (defined by HCFA as claims requiring no information beyond carrier internal resources). By fiscal year 1990, 95 percent of clean claims for participating physicians and suppliers are to be paid within 17 days (24 days for nonparticipating providers).[12] Some carriers expect that these lower ceilings will not allow sufficient time (given available funds) for all the reviews they now conduct. Since savings from discretionary screens are roughly equal to savings from the mandated screens, the program could lose millions of dollars if carriers drop these reviews in order to meet timeliness standards.[13]

Concerns about severe underfunding of new and established PRO activities have been eased by provisions in OBRA 1987 and associated agreements between Congress and the administration that will provide added funds for the numerous new responsibilities that have been assigned to PROs. However, added funding for review processes is not a substitute for investment in research and guidance on review criteria and methodologies for new types and sites of care.

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[12] Claims processing times improved in fiscal year 1987 over fiscal year 1986, a year of considerable disruption in the speed of claims processing. HCFA no longer reports average processing times, but the level of pending claims decreased approximately 30 percent from September 1986 to September 1987 (Health Care Financing Administration, September 1987).

[13] In OBRA 87, Congress sought to defer some Part B outlays into subsequent years by setting a floor on very prompt payments of claims. In fiscal year 1989, no payment is to be issued by carriers until at least 14 days have elapsed from their receipt of the claim. This floor will likely discourage providers from submitting claims electronically since turnaround time will not be appreciably faster for such claims. By 1990, carriers will have a narrow three-day corridor (that is, a 14-day floor and a 17-day ceiling) in which to mail payments for 95 percent of the clean claims they receive from participating physicians. Meeting the timeliness standards may add $25 million to claims processing costs to cover more frequent check writing and mailing of payments.

PRIVATE-SECTOR EXPERIENCE

Federal government decisionmakers have often turned to the private sector for ideas and models that might improve the design and implementation of Medicare policies. Likewise, private payers have sometimes taken cues from Medicare. Not surprisingly, the original structure of Medicare benefits reflected established or emerging practices of private insurers. Ties to private-sector practices were reinforced by the delegation of claims processing to private contractors experienced in paying claims and working with health care providers.

Some private insurers began to require hospitals to do utilization review as early as the 1950s.[14] In Medicare, requirements for utilization review initially followed private payer precedents. However, Congress went beyond these precedents in 1972 when it established the Professional Standards Review Organizations (PSRO) and granted them broad authority to review the reasonableness and necessity of hospital care. In 1982 Congress reorganized this program and replaced the 200-plus PSROs with statewide PROs.

In the 1980s private-payer utilization management programs have increased rapidly in number and variety.[15] They now operate prospectively, concurrently, and retrospectively. The types of organizations involved have also proliferated and include traditional insurers, health care providers, research and consulting firms, and business coalitions. Medicare has adopted some of the newer techniques but tends to apply them less broadly or intensively.

Utilization Management Programs

The following programs constitute a fairly common package of utilization management services for large private employers. Within this general package, programs vary considerably in focus and administration. Some employers split utilization management activities among several different vendors (with one doing preadmission and continued-stay review, another case management, and so forth). Others prefer to consolidate activities in one organization.

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[14] This delegation of review to hospitals reflected the efforts of the Joint Commission on the Accreditation of Hospitals to set standards for hospitals across a broad range of activities, including programs to ensure appropriate use of services.

[15] The term utilization management stresses the interventionist aspects of new programs. The review elements of these programs are important and are actually broader in scope than traditional retrospective review. However, by switching labels from "review" to "management," payers underscore their intent to reduce excess costs and use. They want to project an activist stance that goes beyond identifying problems to correcting them through education, payment denials, selective contracting, and other strategies. Some employers reject such a stance for philosophical reasons or for fear of disrupting relations with employees.

Preadmission or Preservice Review. Although limited forms of preservice review date back many years, broad programs began to grow during the early 1980s. Preservice review is now the cornerstone of managed care for fee-for-service benefit plans developed for employers by established insurers, specialized utilization management firms, and other organizations.[16]

Prior review of elective (nonurgent) hospital admissions was the first step in most preservice review efforts and remains the dominant focus. When patients are admitted on a nonelective basis, reviewers typically require notification and assessment of the case within 48 or 72 hours of admission.

Most preservice review programs assess whether the inpatient care is really needed or whether outpatient services can be used in whole or part. Some programs go further and attempt to assess the necessity of the basic treatment or elements of the treatment. Review of the necessity for treatment tends to be added as programs expand in scope to cover outpatient surgery, home care, substance abuse treatment, and similar services.

Most private review programs are priced on a per employee basis, even by health insurers who include costs for retrospective review in their general administrative expenses.[17] Thus employers are faced with an explicit decision that the price of the service is worth the expected savings.

As a rule, reviewers try to minimize prospective denials of benefits. They rely instead on persuasion, negotiation of acceptable alternative arrangements of care, and deterrence of physician recommendations for unnecessary services. As a result, direct savings from denied payment tend to be low, although program users generally believe that savings from avoided care and negotiated alternatives have been appreciable.

To some extent preservice review programs have explicitly or implicitly taken credit for a general downward trend in hospital use in the past several years. However, a few comparisons of groups with and without preservice review have indicated sharper drops in utilization for the groups subject to prior review (Health Data Institute, 1987; O'Donnell, 1987).

Continued-Stay (Concurrent) Review. A common addition to many preadmission review programs is some form of length-of-stay review. When a planned hospital admission is discussed with a physician's office, reviewers may ask what length of stay is expected. If the physician's prediction exceeds established

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[16] The term preauthorization or precertification of benefits is sometimes used to label preservice review programs. However, many review organizations caution that payment is not automatic following precertification. If retrospective review discovers a problem, primarily evidence that misleading information was provided during preadmission review, then payment may be denied in whole or part.

[17] Increasingly, this price is for a package of services, including such elements as preadmission review, continued-stay review, and second surgical opinions.

norms, a lower target may be negotiated. When the projected discharge day approaches, reviewers check on the patient's status, and if continued inpatient care is warranted, they establish a new date for further review.

Occasionally, organizations send personnel to hospitals and other facilities to review on-site the status of inpatients. Such review may be limited to facilities with identified length-of-stay problems or to high-cost, long-stay patients such as those hospitalized for psychiatric diagnoses.

Some organizations include support for hospital discharge planning as part of their programs. They inform hospital staff about their expectations for prompt, appropriate discharge and may offer assistance in locating alternative care programs. This sort of support and continued stay review generally are a kind of substitute for the financial incentives that prospective per case payment provides for efficient hospital discharge planning for Medicare beneficiaries.

High-Cost Case Management. Management programs for high-cost cases have become increasingly popular in the private sector.[18] These programs target probable high-cost patients, such as those suffering from severe trauma or stroke, for intensive attention and efforts to arrange less costly alternatives to inpatient care when that will not compromise the quality of care. High-cost patients may be identified during preadmission or continued-stay review, through employer or provider contacts, or after claims have accumulated in excess of a set amount, say $20,000.

Some high-cost case management programs include or are limited to determinations about the cost-effectiveness of waiving restrictions in health insurance contracts, such as those that commonly limit payments for home nursing services. In unusual cases, contract exceptions may extend beyond health services--for example, to cover home rewiring or remodeling that would permit noninstitutional care of a patient who needs a ventilator. Sometimes employer approval of benefit exceptions is required on a case-by-case basis, sometimes not. Arrangements for alternative care typically require agreement by the patient, the physician, and the family.

This kind of case management program reflects payer recognition that a small proportion of patients accounts for a large fraction of benefit costs, that benefit design often frustrates cost-effective care for these patients, and that quality of care and patient satisfaction, as well as cost savings, accrue from such programs. Depending on the structure of the program, modest savings of 0.25 to 1.0 percent of total benefit costs have been reported, with ratios of net savings to administrative costs running from more than five to one to just slightly positive (Wright, 1988; Henderson et al., 1988).

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[18] As a generic term, case management usually refers to an array of assessment, planning, coordinating, and other services intended to help a specific individual. The term is used by social service agencies, health care providers, and health benefits managers to describe a similar basic process that varies in its objectives and techniques as it is applied in particular programs for welfare recipients, frail older people, catastrophically ill patients, and others.

Retrospective Review. Review of claims before and after payment dates back at least to the 1950s. With the exception of some Blue Shield plans, the effectiveness of retrospective review has often been limited by the lack of hold-harmless agreements between insurers and physicians. These agreements protect enrollees from having to pay claims denied for lack of medical need.[19] The growth of PPO and IPA arrangements has expanded the use of such agreements, but retrospective denials of payment still produce tension between such organizations and their participating physicians. For that reason the importance of retrospective review as a problem identification tool is often emphasized.

In recent years, proprietary investment in the development of retrospective review and analysis systems has grown substantially. Although initial work emphasized inpatient care, much of the newer R&D activity focuses on software for efficient review and review criteria for noninpatient care. The new programs cover a broad range of diagnostic and therapeutic services, but most use simple frequency thresholds to trigger manual review of claims. The more sophisticated programs vary the thresholds by diagnosis. This reduces the number of claims suspended for manual review and thereby reduces the cost of review.

Data Analysis. Although intervention programs like preadmission review have grown substantially in recent years, the biggest growth has been in the collection and analysis of data on where the benefit dollar is going. The initial emphasis was on hospital data, with information on physician services coming more slowly.[20]

Health benefits data bases are put to many uses. They may suggest areas for benefit plan redesign, targets for utilization review efforts, and subjects for employee and physician education. Cost containment programs can be evaluated and redirected as appropriate.

Data systems are constantly being refined to help utilization review programs identify real problems more efficiently while reducing the effort expended on false positives. For example, the addition of diagnostic data and protocols for making severity-of-illness adjustments is expected to help this focusing process. In the short run these refinements are costly; in the long run they should reduce administrative costs.

Several obstacles to effective use of data persist, including lack of a defined population (that is, a precise count of dependents of enrollees) necessary for creating incidence rates; inconsistency in data reporting, especially when different insurers or other firms contribute to the same data base; insufficient numbers of cases for practitioner and procedure-specific analyses (one reason for the growth of community or statewide data initiatives); long time lags between the provision of services and the availability of utilization and cost reports; problems in creating episode-of-care data that permit assessments based on overall treatment patterns rather than isolated elements of care; and absence of comparison groups.

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[19] These agreements are, in many respects, analogous to Medicare's assignment provisions. As noted earlier, Congress recently required physicians to repay beneficiaries in some circumstances when unassigned claims have been denied by carriers for lack of medical necessity.

[20] The huge volume and questionable quality of information discouraged construction of data bases for physician claims.

Comparing Medicare and Private Fee-for-Service Plans

Although the Medicare program has many characteristics in common with private health insurance arrangements, some important differences may limit the relevance of private-sector experience and innovations. The most important include

- o continued dominance in the private sector of retrospective, charge- or cost-based payment of hospitals with weak incentives for efficient utilization of inpatient care;
- o fee-for-service payment for physicians with generally higher levels of payment than Medicare allows, based either on higher allowed charge limits or on straight charges;[21]
- o small market share (except for some Blue Shield, IPA, and employer plans), which generally means less leverage to secure physician cooperation for cost containment, fewer incentives to invest in physician education and similar efforts, and limited data for utilization analysis and program evaluation; and
- o younger enrollees who are generally healthier, whose need for care is less complicated to evaluate, and who often have employer education and assistance programs to help them understand and negotiate utilization management programs.

Comparative Investment in Utilization Management. No direct comparisons of Medicare and private-sector spending on utilization management and related activities are available.[22] However, it seems likely that spending for large

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[21] Many fee-for-service payers calculate payments using a usual, customary, and reasonable (UCR) methodology that is roughly analogous to Medicare's customary, prevailing, and reasonable (CPR) methodology. For example, in 1986, 48 of 67 reporting Blue Shield plans used some variant of a UCR methodology as their primary payment method; 19 used a fee schedule as their primary method. In contrast to Medicare, most of the plans using a CPR-like method set their equivalent of the prevailing charge limit at a level higher than Medicare's 75th percentile of customary charges. Like Medicare, more than half the plans employed some kind of index, such as the Medicare Part B Economic Index, to limit payment increases (Blue Cross and Blue Shield Association, 1988).

[22] Some limited comparisons are possible for overall spending on program administration in Medicare and the Federal Employees Health Benefits Plan (FEHBP). Expenditures for Medicare program administration run about 2.5 percent of total benefit outlays. (For Part B only, the figure is 4 percent.) Within the FEHBP program, administrative expenses reported by the large, privately administered indemnity plans run approximately 6 to 9 percent of premium income. Smaller plans run perhaps 11 to 15 percent (the maximum covered by FEHBP). These differences in administrative expenses reflect many factors, including Medicare's economies of scale, its transfer of some cost control responsibilities to hospitals through PPS, different program requirements, and different accounting methods.

private programs is relatively higher. Many large private employers appear to have eased their previously unrelenting drive to reduce the percentage of total health costs devoted to benefit plan administration. They are paying significant additional amounts, often on a per employee or per service basis, for utilization management services such as preadmission review or high-cost case management. More has been invested in data collection and analysis. Their rationale is that low administrative costs are no bargain if the result is higher benefits costs.

Trends. Precise figures and exact comparisons are not available, but private payers appear to be seeing escalations of cost and use of physician services similar to those experienced by Medicare. Sharp increases in costs for out-of-hospital services are typical, as are substantial geographic variations in use. In the indemnity plans in the Federal Employees Health Benefits Program, which has more in common with private benefit plans than with Medicare, average employee premiums went up 31 percent for 1988 (this includes hospital, physician, and other covered services.)

How these trends will affect private-sector utilization management programs is not clear. They will certainly intensify the pressures already being faced by these programs. These pressures include the high administrative costs of review, the difficulty of documenting avoided utilization, the leveling off of downward trends in hospital use, the suspicion that uncontrolled use of outpatient care may be vitiating program savings, and the competitive threat posed by health plans such as HMOs and PPOs that can exclude overutilizing providers from participation.

The more sophisticated private firms involved in utilization management are making significant investments in R&D to build next generation products and administrative systems. They are even exploring such exotic fields as artificial intelligence to test their potential for improving the quality, consistency, and focus of utilization review. These firms believe that cost containment incentives and controls tend to deteriorate over time and need to be refined or replaced by new techniques.

Medicare should be poised to take advantage of private sector research and development efforts when feasible and to exercise initiative where this work does not to meet its needs.

DIRECTIONS FOR MEDICARE

All projections indicate that escalating expenditures will continue to put cost pressure on the Supplementary Medical Insurance Trust Fund. New technologies, new practitioners, and new benefits will all contribute, as will practitioner efforts to maintain income in the face of greater competition from other providers and intensified efforts by payers to control costs. The importance of limiting the amount of unnecessary or marginally necessary care will only grow.

Utilization review in Medicare has been significantly strengthened in the 1980s, but problems remain. The clinical soundness of PRO and carrier review criteria has not been systematically investigated. Minimal R&D funds are available to assess and improve the effectiveness of review. The adequacy of contractor resources for utilization review and related provider relations activities is a continuing problem. The following discussion suggests developing a national

strategy to strengthen the clinical, methodological, and administrative bases of utilization review; testing expansions in the scope of Medicare utilization review; and changing certain budgeting and administrative practices to increase the productivity of the limited resources available for review.

Program Leadership and Oversight

Although Medicare must seek a reasonable balance of national guidance and local discretion in medical necessity reviews, HCFA needs to exert stronger leadership in two areas: the clinical soundness of contractor review criteria and the effectiveness, efficiency, and administrative reasonableness of the processes and tools of review. Although HCFA extensively reviews the procedural aspects of contractor performance and is expanding research on quality of care, it devotes few resources to assessing the clinical soundness and measuring the effectiveness of utilization review and to developing better approaches in the future.

For the short term, HCFA should fund a comprehensive assessment of existing criteria and processes for medical necessity review. The focus should be on the clinical reasonableness, cost-effectiveness, and administrative burdens of contractor activities and HCFA oversight. Whenever possible, this assessment should build on the findings of related studies by GAO, IOM, and other organizations,[23] and it should draw on the clinical and other expertise of medical groups, academics, private payers, and others. The Commission urges that the increasing role of proprietary utilization review criteria and tools be examined to identify potential problems and opportunities for Medicare and health care delivery generally.

For the long term, an ongoing commitment to research and development is needed to expand the clinical foundation for setting standards of appropriate care and to identify educational, review, and other techniques for incorporating these standards into everyday medical practice.[24] In addition to sponsoring research directly, HCFA should consider establishing one or more advisory centers or institutes, somewhat analogous to those it uses for health policy advice, to assist the agency and its contractors with the design of review criteria and tools. Priorities should include developing and disseminating better methodologies for analyzing local data, examining episodes of care across multiple settings and providers, and measuring the direct and indirect effects of utilization review.

Scope of Medicare Utilization Review

Medicare should expand its efforts to develop, test and apply utilization management tools to limit inappropriate use of Part B services. Three areas to investigate are more intensive review of noninpatient care, expanded preadmission review, and case management for certain high-cost patients. In addition, since both carriers and PROs identify patterns of inappropriate utilization, HCFA should consider how they might productively share information about problems, corrective actions, and results.

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[23] In some but not all cases, findings related to reviews and processes of the quality of care and will apply directly to reviews of medical necessity.

[24] HCFA is developing a research agenda on quality assurance. Research on techniques to reduce excess use and excess costs is also needed.

Review of Outpatient Care. In response to the rapid growth in services outside the hospital inpatient setting, HCFA should be aggressively investigating the benefits of more intensive and focused review of claims for these services. It should be evaluating new review criteria and the associated data and software needed to make such review administratively practical. Both prepayment and postpayment uses should be considered.[25]

On a less comprehensive level, HCFA should test intensified review of EKG, X-ray, and other common tests that constitute a significant percentage of total Medicare costs. Some carriers already have criteria for such review, and HCFA should investigate the acquisition of relevant subelements of proprietary review systems. Where carrier computer systems are inadequate to run more sophisticated review programs, investments in new hardware or software may be necessary.

Since many improvements in the review of both inpatient and outpatient care depend on diagnostic data, HCFA should move promptly to decide whether diagnosis codes should be required for Part B claims. Physicians are not currently required to provide these codes on claims forms, and the narrative information they do provide may be very limited. In addition, carriers are not now required to retain and code such information, although a number do. Adding diagnostic information would place more demands on physicians and carriers, but it should help reviewers focus more efficiently on problem practitioners. This would cut program costs and reduce beneficiary and practitioner complaints about denied claims.[26]

Preservice Review. Preservice review may have more potential for reducing inappropriate use than is currently being realized in Medicare. Admission rates for the elderly have declined in recent years, but there is evidence that excess hospitalization persists. For example, the Inspector General of the Department of Health and Human Services recently reported finding that 10 percent of

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[25] Because many outpatient services such as office visits and routine laboratory tests have low unit prices, the cost-effectiveness of reviewing these services is a concern. Five years ago, approximately half of the physician services billed to Medicare had approved charges of $20 or less (Burney and Schieber, 1985). To the extent that automated, diagnosis-based screens and other advances in review technologies can target problem claims and problem patterns of care more effectively and efficiently, costs will go down relative to savings.

[26] For diagnosis codes, as for other information in claims and medical records, accuracy is always a concern. Errors in the use or recording of procedure codes is common. And experience with incorrect diagnosis coding for hospital services (Hsiao et al., 1988) indicates that a systematic plan for practitioner education, claims audits, incentives for correct coding, and careful initial use of data would be needed to ensure sound implementation of requirements for diagnosis codes on physician claims. This would take time, as would necessary modifications in carrier processing systems and review policies.

Medicare admissions were not medically justifiable (Kusserow, 1987). And the gap in hospital use rates continues for Medicare beneficiaries with fee-for-service coverage compared with those in HMOs.[27]

Furthermore, a recent study of preadmission review in Medicare reported perceptions that the program had less impact than more comprehensive private programs (Project HOPE, 1987). Reassuringly, the study also concluded that "PRO admission review does not appear to result in quality of care or access problems for Medicare beneficiaries." The study noted that broader PRO review could reduce hospitals' problems with retrospective payment denials.

The effectiveness of PRO review of the necessity of hospital admissions needs more systematic evaluation. This evaluation should start with existing efforts but should eventually include the long-delayed implementation of requirements for expanded preservice review of the Omnibus Budget and Reconciliation Act of 1986. Variations among PROs and between PROs and private review programs should be explored to identify effective strategies that can be transferred from more to less successful programs. And the utility of small-area analysis in suggesting targets for preservice and postpayment claims review should be investigated.

High-Cost Case Management. For private payers and some state Medicaid programs, high-cost case management appears to be one of the few cost containment programs to have generally positive evaluations by all participants, patients, payers, and providers.[28] Medicare, which now has no direct counterpart to these efforts, should evaluate the potential cost, quality, and access benefits of incorporating a voluntary high-cost case management program. Such an evaluation will be particularly timely if catastrophic coverage is added to Medicare.

The major reason for Medicare's lack of interest in high-cost case management appears to be the incentives of hospital prospective payment, which make some aspects of a Medicare-sponsored program redundant. Medicare payments for very long stays in general community hospitals are more controlled than those of most private payers and cover a smaller proportion of hospital charges. That and payment by Diagnostic Related Group for normal cases has in turn intensified hospital efforts to achieve prompt discharges of both more and less

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[27] In a recent survey (InterStudy, 1987) of HMOs with Medicare contracts, about half reported between 1,500 and 2,500 hospital days per 1,000 beneficiaries. (A quarter reported that they did not know their rate.) For the elderly population overall, hospital use rates have been dropping, but the average remains over 3,000 days per 1,000. (See also Group Health Association of America, 1987; Luft, 1981) Although evidence suggests a biased selection of healthier beneficiaries into HMOs, this effect probably cannot account for the difference in inpatient utilization (see chapter 15).

[28] Under some conditions the federal government permits states to make exceptions to Medicaid benefit limitations. Most state initiatives are intended to facilitate home care for ventilator-dependent children. Such care is cost-effective though still very expensive. It generally improves the quality of life for these children and their families.

seriously ill patients. However, hospital efforts have sometimes been criticized for focusing more on getting patients out of the hospital than on ensuring efficient alternative care for those needing further treatment.

Case management for high-cost patients might achieve some cost savings for Medicare by intensifying efforts to arrange appropriate, less expensive forms of care. In particular, it could provide a controlled mechanism for approving exceptions to restrictions on Medicare benefits, such as administrative limitations on home care. If appropriately defined to compare projected costs of alternative forms of care, an exceptions process could save on expenditures for specific patients but would not raise the threat of open-ended utilization. For catastrophically ill beneficiaries, the result would be greater access to care. Also, case managers may consider a wider array of options than hospital discharge planners since they relate to providers across broad geographic areas and specialize in developing individualized plans for a very limited set of patients.

To investigate these possibilities, the Commission will assess the applicability of case management to Medicare. The assessment should concentrate first on estimated net effects on Part A and Part B expenditures and then, as appropriate, move on to other issues. Overall, an assessment would need to identify high-cost cases, options for alternative treatment, benefit restrictions that might limit alternative care, methodologies for making benefit exceptions, legal and political concerns, and administrative mechanisms for implementing a program.

Budgetary and Administrative Resources

In its 1987 report the Commission joined others in warning that very tight funding for claims edits, audits, and medical review tends to be counterproductive. These warnings have had some impact. The President's fiscal year 1989 budget proposal calls for $50 million in additional funding for carrier medical review, an increase of more than 60 percent over fiscal year 1988. Details of the proposal are not yet available, particularly whether a one-time infusion of funds or an ongoing commitment is expected. It is not clear whether funds could be productively spent by carriers if they anticipated a sharp cutback in monies for utilization review after fiscal year 1989.

Treatment of Savings. The underfunding of medical review and related cost-saving activities is not entirely a function of budget limitations. In part, it is due to what one observer calls the budget scorekeeping rules applied by the Congressional Budget Office and the Office of Management and Budget. These rules do not require that the expected effects of cuts or increases in administrative funding be reflected in higher or lower estimates of Medicare benefit outlays.

To facilitate rational assessment of funding options and deficit reduction strategies, Congress and the administration should explore the feasibility of identifying and explicitly crediting savings or costs in benefit outlays that are projected for proposed increases or decreases in administrative expenditures for

cost containment. They might also consider a similar approach for explicitly recognizing the administrative costs of major program changes such as the payment floor described earlier.[29]

Incentives. Medicare should also test incentives for contractors to exercise greater initiative in medical review and related activities. Now, doing better than minimum program requirements brings few if any rewards.

Carriers could, for example, be allowed to "reinvest" a modest portion of their documented savings in one year to expand discretionary review and other controls in the next year.[30] Such an incentive program might be vulnerable to charges that contractors would deny needed care so as to qualify for additional resources.[31] Therefore, protocols would be needed for monitoring the reasonableness of claims denials, defining appropriate investments and acceptable administrative costs, and reporting benefit savings.

Research. One objective of the research agenda recommended in the discussion of program leadership should be more productive use of limited carrier resources. Unproductive reviews need to be winnowed out and contractor efforts focused on serious problems. For example, for PROs to review a quarter of all discharges as they do now is expensive and may be unproductive (Department of Health and Human Services, 1988). Likewise, vague or inappropriate criteria waste the expensive time of nurse reviewers, the physicians to whom they refer problem cases, and the providers and practitioners inappropriately identified as problems. Redefining and better focusing the targets for review would increase program cost-effectiveness and reduce burdens on providers, practitioners, and beneficiaries.

Other. HCFA should consider further actions to limit nonessential administrative duties. The agency should continue to assess whether the Contractor Performance Evaluation Program (CPEP) can be less detailed without compromising the identification of significant contractor problems.

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[29] Carriers will have to take an estimated $35 million from other activities to cover the unbudgeted costs of implementing the claims processing floors and ceilings and the provisions for medical necessity refunds.

[30] This would probably require legislation. A similar opportunity could also be considered for PROs, although most may need to concentrate on their new and existing responsibilities for the foreseeable future.

[31] The emphasis here is on cost savings, but some provisions for investment in expanded physician education and refinement of review criteria could be included. These activities are important, although their impact on cost containment tends to be either difficult to assess or deferred to future years.

Multiyear contracts and appropriations for carriers with satisfactory records of performance should also be investigated. HCFA has simplified the yearly contract cycle, but it still consumes scarce resources to submit and negotiate budgets, conduct and debate formal CPEP ratings, and revise planning materials. Further administrative and legislative steps toward a multiyear contract and appropriation could eliminate some effort of marginal value and redirect it to areas of greater need. Just as now occurs with one-year contracts, midstream adjustments could accommodate new legislation and correct problems identified during ongoing program monitoring. A formula or other workable mechanism for funding unexpected increases in claims volumes would be essential.

CONCLUSION

Since medical care is a dynamic process, management of the use of services cannot be static. It must adapt to new health care technologies, restructuring of the delivery system, and changing attitudes about health care. The suggestions offered above are intended to strengthen Medicare's clinical and administrative capacity to make these adaptations.

Stronger national leadership combined with improvements in the clinical basis for utilization review should gradually increase consistency in medical practice and reduce variability in medical review policies. This does not imply an immediate wholesale application of national standards to local communities. The clinical base for developing such standards is still limited, as is practical access to diagnostic and other information necessary to assess care. Under these circumstances the familiarity of PROs and carriers with local practitioners and utilization patterns is valuable. Moreover, if Medicare relied solely on uniform national criteria for utilization review, many patterns of local misuse would probably go undetected.

Nevertheless, improving the breadth and depth of clinical guidelines for appropriate medical practice is an important objective. Chapter 13 discusses objectives and processes for developing such guidelines.

APPENDIX 12

QUALITY ASSURANCE IN MEDICARE

To make certain that beneficiaries are protected from poor-quality care, Medicare relies primarily on two broad approaches: it sets basic standards for provider participation in the program, and it requires selective review of the care provided by these organizations and practitioners.[1] In addition, the government is expanding its commitment to research to strengthen the scientific and methodological basis for its quality assessment and assurance policies.

During the coming year the Commission will be examining the many public and private initiatives now under way to improve the scope and effectiveness of quality assurance efforts. In its 1989 report it expects to discuss quality of care more fully, with particular attention to implications of physician payment reform.

Standards of Participation

For physicians, other practitioners, and suppliers, state licensure is the fundamental requirement to participate in Medicare. However, licensed practitioners and suppliers may be excluded from the program under certain conditions--for example, when licensing boards or review organizations have identified very serious deficiencies in quality of care.

Medicare has established more specific conditions of participation for institutional providers of health care such as hospitals and hospices. The conditions are primarily intended to ensure quality and safety, although some pertain also to sound financial management (such as preparation of an annual budget).

For the most part, the responsibility for certifying compliance with these conditions has been delegated to state agencies.[2] Hospitals and ambulatory surgery centers are deemed to meet most of the conditions of participation if they are accredited by an approved organization. For hospitals, accreditation by the Joint Commission on Accreditation of Health Care Organizations or the American Osteopathic Association qualifies.

Review of Care

The limitations of licensing and accreditation mechanisms in identifying poor-quality providers and correcting quality problems have led government and others to institute more direct oversight of the quality of care. This search has intensified as the proliferation of cost containment strategies has raised concerns about effects on quality of care.

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[1] This discussion describes Medicare quality assurance activities as they apply to non-HMO providers. Activities related to HMOs are described in chapter 15.

[2] For some organizations, such as ambulatory surgical centers, these requirements are called conditions for coverage.

For Medicare, the major responsibility for reviewing the quality of care provided to beneficiaries rests with Peer Review Organizations. Hospitals under prospective payment must contract with PROs for utilization and quality review, and the scope of PRO review is gradually expanding to post acute and ambulatory settings.

Reviews of quality of care by PROs take several forms.[3] Generic quality screens and premature discharge screens are applied to all cases selected by a PRO for retrospective review (for example, the 3 percent sample of discharges and the samples of readmissions and transfers).[4] Some specific types of cases, such as readmissions within 15 days of discharge, are sampled and reviewed to monitor potential negative effects of prospective payment, for example, premature release from the hospital. In addition to case-by-case reviews, PROs create profiles of hospitals and physicians that are used to identify aberrant patterns of practice, such as high mortality or premature discharge rates.

If a PRO identifies an apparent problem with quality of care, it is supposed to verify that a problem exists and, if necessary, initiate corrective actions. These actions range from informal discussion with a practitioner or provider to exclusion from the program for very serious problems. PROs are legislatively permitted to deny payment for poor-quality care, but HCFA. has not yet issued implementing regulations. As noted elsewhere in this chapter, the major reason for negative ratings of PROs after the first contract cycle was failure to follow up identified problems with quality of care.

Fiscal intermediaries who process Part A and certain Part B claims have some quality review responsibilities. For hospices the responsibility for reviewing quality of care is explicit and may involve review of claims, treatment plans, and medical records; interviews with beneficiaries at their homes; and investigation of beneficiary complaints. For skilled nursing facility care, requirements for quality review are not very specific, but the claims and medical records are extensively reviewed by intermediaries for necessity and appropriateness of care and possible premature discharge from an acute care hospital. For home care, intermediaries are supposed to report to HCFA any quality problems they may identify during claims review for medical necessity and coverage.

Carriers have no explicit responsibility for reviewing quality of care. However, their medical necessity reviews may uncover poor-quality care, and some carriers have initiated review screens or studies aimed specifically at potential quality problems. One carrier, for example, contracted for a study of mortality associated with coronary bypass surgery. If carriers find problems, they are not required to report them or seek corrective action.

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[3] The process starts with claims data supplied by fiscal intermediaries. From these data, PROs draw samples of discharges, readmissions, and so forth. PRO staff then examine the medical record associated with each case selected for review. Physician claims data are not routinely provided to PROs.

[4] Generic screens cover six areas: adequacy of discharge planning, medical stability of patient at discharge, unexpected deaths, unscheduled returns to surgery, nosocomial infections, and in-hospital traumas such as falls and medication errors.

Other Initiatives

Perhaps the most controversial Medicare initiative related to quality of care is HCFA's publication of hospital mortality rates overall and for selected types of care. Hospitals with higher-than-expected mortality rates are explicitly identified. No specific work is under way to extend such analyses to physicians, but HCFA leadership has suggested it may eventually happen.

HCFA recognizes that quality assurance in Medicare has many weaknesses, and it has an administrative and research agenda designed to improve future efforts. The administration is proposing to spend approximately $500 million in fiscal year 1989 on quality-related activities, including PRO reviews, research, medical review, and provider surveys and certification. Assessments and recommendations on Medicare quality of care activities are expected soon from the General Accounting Office, the HHS Inspector General, and the Institute of Medicine.

Beyond these public sector activities, a variety of private organizations are making major efforts to develop standards of care, measurement tools, and intervention strategies (Heinen et al., 1988). For example, the Joint Commission on the Accreditation of Health Care Institutions has an ambitious five-year program to expand its standard setting and assessment capabilities.

These public and private projects are broad in scope. They focus on the medical outcomes of care, the data and methodologies needed to monitor and assess these outcomes, the management processes and structures that encourage good care and catch poor care, and the role of consumers in judging and influencing the quality of care. The findings that are emerging from these projects will help the Commission in its upcoming work on quality of care.

CHAPTER 13 INCREASING APPROPRIATE USE OF SERVICES: PRACTICE GUIDELINES AND FEEDBACK OF PRACTICE PATTERNS

Services provided to Medicare beneficiaries reflect the decisions of physicians and their patients. Many of these decisions are made with incomplete knowledge of which services would be clinically appropriate[1] for each patient. Because of this uncertainty, patients receive some services they don't need, and sometimes do not receive services that would benefit them.

The use of services is also influenced by payment policy and by review for coverage and medical necessity. The effectiveness of utilization review to reduce services of least benefit to patients is limited by the soundness of the clinical criteria on which review is based. Providing greater knowledge of the appropriate use of services to physicians and patients, and a sounder basis for review and for payment decisions would improve the quality and efficiency of care and may reduce the rate of growth of expenditures.[2]

This chapter focuses on two methods of providing physicians and other decisionmakers with clinically relevant information about appropriateness of services: feedback to physicians on their patterns of utilization compared with those of their peers, and practice guidelines that provide specific information about appropriate use of services. These methods have the potential to reduce expenditure growth by reducing the use of unnecessary services and to increase quality of care.[3] Their potential to moderate the rate of growth of expenditures without reducing quality of care makes them particularly attractive to those concerned about threats to quality and access from cost-control measures. This chapter describes the methods and examines their potential, and it sets out a work plan to fully evaluate them and to develop recommendations for their use in Medicare.

UNCERTAINTY AND INAPPROPRIATE USE OF SERVICES

There is unexplained variation in the use of services and substantial use of unnecessary services. This is due in part to the fact that knowledge of what services are effective for different patients is incomplete.

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[1] Appropriate services are those that can be expected to provide benefits to the patient that are greater than the attendant risks. Thus, appropriate services are those that are expected to improve the patient's health. Though appropriate care is defined without reference to monetary cost, it would exclude services that were expected to have no benefit for the patient, regardless of cost.

[2] Throughout this chapter the shorter phrase, "reduce expenditures," will be used to mean "reduce the rate of growth of expenditures." Most would agree that the latter is the objective, even though the former term is often used.

[3] Quality could be increased by reducing services with no benefits or with risks greater than the benefits. Practice guidelines and utilization feedback could also increase quality by increasing the chance that patients will receive services they need.

Evidence of substantial variation in the use of services among geographic areas has been presented for hospitalization and for many procedures (for example, see Wennberg et al., 1982; Wennberg, 1984; Chassin et al., 1986). Variations in the use of a service may result in part from variations in the access to services, in the supply of physicians and hospitals, in organization of practice such as the presence of prepaid group practices, and population characteristics such as age and incidence of health problems (Wennberg, 1984, 1985; Hornbrook and Berki, 1985). Some of the variation may represent unnecessary services.

In fact, studies have shown some unnecessary use of services including laboratory tests, radiological procedures, hospital admissions and days of care, surgical procedures, and drugs (Eisenberg, 1986; Schroeder, 1987; Chassin et al., 1986; Hammons et al., 1986).[4] However, differences among geographic areas in the amounts of unnecessary services do not explain variations in use of services; roughly the same fraction of services was judged to be inappropriate for three procedures studied in both high- and low-use areas (Chassin et al., 1987). The reasons for the variation are not fully understood.

Much of the variation and the use of unnecessary services has been attributed to uncertainty among physicians as to what services are appropriate for their patients (Eisenberg, 1986; Wennberg, 1982, 1985, 1987; Eddy, 1984). Wennberg has noted that variation is lower for services for which physicians agree about appropriate use, such as the need to hospitalize patients with hip fracture and suspected myocardial infarction. Uncertainty may also play a substantial role in use of services for defensive medicine (Eisenberg, 1986).[5]

Uncertainty about which services are appropriate is present at several levels. The collective knowledge of the effectiveness of services--contained in the accumulated body of clinical research and technology assessment--is incomplete. Physicians and others often cannot know which services would be most appropriate for a patient. Further, individual physicians and other decisionmakers may not be fully aware of information that is available, either because the knowledge has not been assembled in usable form or has not been made easily available to physicians. Also, information that is available may not be used if the physician is unsure of its accuracy.

Better informed physicians and patients would use services more appropriately, with improvements in quality and efficiency of care. Similarly, a better clinical basis for review of utilization and quality, and for payment decisions, would reinforce appropriate care. Knowledge of appropriate care can be increased in two complementary ways: increasing medical knowledge and making better use of existing knowledge.

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[4] Studies to assess the extent of underservice are more difficult to design and carry out than those to identify unnecessary services, but underservice has been found when sought (Hammons et al., 1986).

[5] Of course, some of the variation is necessary and desirable. A number of factors were noted above that lead to variation in use among small geographic areas. The use of services for individual patients will vary not only due to each of these factors, but also due to differences in patients' individual clinical needs and personal preferences, differences in the resources available for diagnosis and treatment, and other factors.

The basic fund of medical knowledge can be increased through clinical research and research to evaluate medical practices. The extent of basic medical knowledge is a limiting factor in our ability to provide effective and efficient care. Basic knowledge can be expanded through biomedical research. Further, substantial additional work to evaluate the safety, efficacy, and effectiveness of clinical practices must be undertaken if we are to translate the fund of knowledge into sound medical decisions (Institute of Medicine, 1985). Without assessment of the effectiveness of medical practices, physicians cannot know what benefits a procedure or practice would provide to a patient (Wennberg, 1985, 1987). There is a compelling need for a much greater effort to evaluate both existing and emerging medical practices and techniques.

The focus of the rest of this chapter is not on this important task but rather on the subsequent step: getting sound clinical information to physicians, patients, reviewers, and payers in a form they can readily use.

FEEDBACK OF COMPARATIVE PRACTICE PATTERNS

Providing physicians with comparisons of their patterns of utilization to those of their peers is intended to stimulate them to reevaluate and modify their practices. Feedback of utilization patterns could be implemented relatively easily and inexpensively by Medicare.

Providing information to physicians about their own use of services and how their use compares with that of peers is intended to improve the use of services indirectly. For instance, a physician would be provided the information that he hospitalizes patients with pneumonia three times as often as the average physician in the area. Such differences suggest that a physician whose use of a service differs from implicit community norms of care should examine his practices, and if appropriate, to change his behavior to more nearly conform to that of his peers (Wennberg, 1984).[6] The approach implicitly assumes that resulting changes in use of services are likely to reduce unnecessary services without reducing quality of care.

This approach is illustrated by a project sponsored by the Maine Medical Association. Physicians in an area are provided with their age-adjusted rates of utilization of selected procedures, and comparisons with other areas in Maine.[7] The project also provides a forum for physicians to discuss these findings and the appropriate use of these procedures and an exchange of information among physicians. Though it has not yet concluded, and has not been formally evaluated, the project is reported to have led to reductions in use by some physicians with high use, and increases by some physicians with low rates of use (American Medical Association, 1986; Wennberg, 1985). Several other

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[6] It is not assumed that the high rate is too high, or the low rate too low. Differences in rates may reflect differences in the patients with pneumonia seen by different physicians. Rather, the approach is designed to lead physicians to examine there practices, whether high or low, and to make changes only if they consider it appropriate to do so.

[7] The project has focused on seven procedures, including prostatectomies, laminectomies, and hysterectomies.

projects to provide physicians with comparative utilization information have been associated with similar changes in use of services (Wennberg, 1977; Dyck, 1977).[8]

The Health Care Financing Administration has recently funded a research project by the American Medical Review Research Center (AMRRC) that will enable twelve Peer Review Organizations (PROs) to provide comparison utilization data to physicians in their areas and to help them understand the implications of the data. The project, which has not yet begun, will include evaluation of the effects of the intervention on appropriateness of utilization of services, and the access and quality of care.

Several factors appear to increase the potential for comparative utilization feedback to improve appropriate use of services (American Medical Association, 1986; Eisenberg, 1986; Schroeder, 1987). First, the information is more effective if comes from a credible entity such as a medical society. Such sponsorship not only lends credibility to the project but also brings peer pressure on physicians to participate and to evaluate their own practices. Second, the information provided should be accurate, timely, and specific to the physicians involved. The data used in the Maine Medical Assessment program, for instance, is collected quarterly and represents all hospitalizations and all inpatient services provided by physicians in Maine, regardless of payer.[9]

However, experience suggests that even with these features, information alone may not change physicians' practices. Physicians must have a reason or an incentive to acquire and use the information, and to change their behavior (Eisenberg, 1986; Schroeder, 1987). Incentives can be personal, professional, or financial. A physician may be more receptive to change that might improve the quality or efficiency of care due to a personal desire to improve, peer pressure, a desire to attract more patients, or financial incentives to reduce costs. In short, the climate or environment for change will affect the response to the information.[10]

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[8] Because the interventions were not designed as controlled experiments, the effects of the intervention cannot strictly be attributed to comparative utilization data, and the effect if the approach were applied to Medicare cannot be predicted with confidence.

[9] Maine law requires that all hospital discharges be reported to the state regardless of payer. This allows the state to construct a complete data base for hospital admissions and procedures performed in hospitals. A complete data base is needed to properly determine rates of use of services; for many services, this would require merging data for all sites of service (inpatient and outpatient) as well as all payers. Medicare data alone would not allow determination of rates that would allow proper comparisons among areas or physicians. The Maine data was also adjusted for border crossing--that is, for use of services in an area by persons from outside that area. This adjustment is also needed to calculate rates of use appropriate for comparison.

[10] The effectiveness of feedback of utilization information might be increased by the presence of utilization review (see chapter 12) or expenditure targets (see chapter 14).

Comparative utilization feedback is relatively easy and inexpensive to implement.[11] It does not require development of specific standards of practice. It is not punitive and is not directly linked to financial penalties, so it may be more readily accepted by physicians. It does not constrain clinical freedom of physicians. On the other hand, there are requirements for data that may not be met in many areas,[12] and the effectiveness of this approach for Medicare is hard to predict. It is not known whether physicians would seriously evaluate their practices and make changes. Since this approach does not provide physicians with specific information about the appropriate use of services, the physicians themselves may find it difficult to determine how best to change their practices.[13]

The feedback approach has the potential to reduce unnecessary services without reducing quality of care. The Commission will determine what can be learned from current projects and recommend whether a program using this method or a demonstration should be instituted.

PRACTICE GUIDELINES

Like comparative feedback, practice guidelines have the potential to moderate the rate of growth of expenditures without damaging quality of care by selectively reducing unnecessary services. In fact, they are likely to increase the quality of care.[14]

Practice guidelines are essentially clinical recommendations for patient care. They provide guidance to physicians and others who must make decisions about the use of specific medical procedures in the face of uncertainty. In this discussion, the term refers to formally developed guidelines based on the clinical research literature and the collective judgments of experts. Such guidelines provide a way to assemble and clarify existing knowledge, to extend it through consensus of expert physicians, and to make it available in a usable form.

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[11] The Maine Medical Assessment Project costs about $300,000 a year to provide feedback for use of seven procedures. The expenditures are primarily for data processing and staff, and do not include substantial amounts of volunteer time by physicians.

[12] As noted earlier, the effectiveness of the program is increased by a database containing the use of services for all of a physicians' patients rather than Medicare patients alone.

[13] Feedback of comparative utilization information suggests to the physician that he should examine his practices, and perhaps change toward the mean practice of his peers; but it does not provide more positive information about how to use services. Coupling utilization feedback with dissemination of practice guidelines (see below) for the same services could provide additional information to help physicians make appropriate changes in their use of services.

[14] Sound guidelines can be expected to increase efficiency and quality of care. Unless reduced costs from elimination of unnecessary services were balanced by increases in needed services, the rate of increase in expenditures would fall. In any case, the system would be more efficient, and the value received for each dollar spent would increase.

Both formal and informal practice guidelines have been used to provide clinical information to physicians for years: protocols for diagnosis and management of malignancy, recommendations for the use of screening tests such as mammography, protocols for care in an emergency setting and intensive care units, manuals for diagnosis and therapy of common medical and surgical problems.[15] As Eddy argues, physicians follow informal guidelines or clinical policies in making many clinical decisions. More formal practice guidelines provide a way to improve clinical decisions.

Practice guidelines can also be used as the clinical basis for utilization review and quality assessment, and to determine eligibility for payment.[16] Although physicians do not often welcome external review, practice guidelines offer a means to improve the accuracy of review. If reviewers are to influence physicians' decisions, they should base the review on the best medical knowledge available. However, it is critical that guidelines used for utilization review or to determine payment be used with full appreciation that appropriate care depends on the particular clinical needs and preferences of the patient, and that the clinical judgment of the attending physician must be respected.

Formal guidelines have been developed by specialty societies, independent investigators, the National Institutes of Health, and payers such as Blue Cross and Blue Shield.[17] This section examines several guidelines and processes used for their development, the and discusses how guidelines might most effectively be used in Medicare.

Types of Guidelines

It is useful to distinguish two kinds of practice guidelines. The first focuses on a particular procedure, such as coronary artery bypass surgery, and provides recommendations for how to use it. The second focuses on a particular patient problem, such as chest pain, and provides recommendations for appropriate care for a patient with that problem, including which services to provide. These differences are reflected in how the guidelines should be used.

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[15] See, for example, the Washington University *Manual of Medical Therapeutics* (Orland and Saltman, 1986) and *Patient Care in Pediatric Surgery* (Leape, 1987).

[16] In this section, utilization review is defined as it is in chapter 12 to include review to determine payment for services. For instance, preprocedure review determines whether a proposed procedure (and payment for it) is appropriate.

[17] For instance, guidelines for the use of coronary angiography, upper gastrointestinal endoscopy, coronary artery bypass surgery, and carotid endarterectomy were developed for the Health Services Utilization Study (Chassin et al., 1987). The National Institutes of Health Consensus Development Conferences have developed recommendations for the use of more than thirty procedures (Jacoby, 1985; Perry, 1987). The American College of Physicians has developed guidelines for more than sixty procedures through its Clinical Efficacy Assessment Project (White and Ball, 1986). According to an informal survey by PPRC staff, a number of other specialty societies have developed practice guidelines; several other societies responded that they are now or will soon be developing guidelines.

Guidelines for the use of a particular procedure specify when it is appropriate to use the procedure. For example, guidelines for the use of coronary angiography specify which indications for the procedure would be appropriate, inappropriate, or equivocal (Chassin et al., 1987). According to these guidelines, it is appropriate to perform coronary angiography for a patient with nonspecific chest pain and a positive treadmill test, and inappropriate for a patient with stable mild angina who has a negative treadmill test result or has not had a treadmill test. The guidelines could help a physician considering whether to recommend coronary angiography. Similarly, a program to review utilization could use the guidelines to screen cases with apparent inappropriate indications so they can be evaluated further.[18]

The second type of guideline defines which services and what care are appropriate for a particular kind of patient. For instance, guidelines could be developed for the diagnosis and management of abdominal pain or jaundice, or for the management of diabetes mellitus. Such guidelines are more complex than the first type because they must describe and recommend action on a number of clinical decisions. Given the sequential nature of clinical decisions--each step depends on the results of previous steps, such as previous diagnostic tests or the response to therapy--these guidelines must include a branching tree of sequential contingencies that depend on specific aspects of each patient's case. While useful to inform physicians of a recommended approach to a medical problem, their complexity may make them difficult to use for utilization review or to determine eligibility for payment.

What Are Good Guidelines?

Guidelines must be unambiguous and specific enough that physicians can use them. The clinical rationale for the recommendations should be apparent, and they must reflect the best medical practice. They must also take into consideration clinically relevant differences among patients, and respect the role of clinical judgment in determining what is appropriate care.

Ideally, guidelines should be judged by their impact on the results of the clinical decisionmaking process: the quality and efficiency of patient care. But because our ability to evaluate quality of care by its outcomes is limited, it is generally not yet feasible to fully evaluate practice guidelines through their effects on quality and efficiency. Until better methods are developed, guidelines must be evaluated largely through less rigorous methods, such as the judgments of informed physicians.[19]

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[18] As discussed below, guidelines used in utilization review should be used to screen proposed uses for appropriateness rather than as the method of final determination.

[19] Clinical judgment refers to the incompletely understood process by which a physician synthesizes both objective features of the patient's presentation and more subjective, less easily quantified elements; and weighs the advantages and disadvantages--often only partially known--of each option available in making a diagnosis and choosing a course of treatment.

As an alternative, one can require that good processes be used to develop guidelines: a good process is expected to result in good guidelines.[20] A proposed guideline could be evaluated on its own merits, and the process through which it was developed should also be evaluated.

Developing Sound Guidelines

A sound process to develop guidelines takes full account of the collective knowledge in the medical literature and extends it in an unbiased way through consensus of expert physicians. The guidelines must recognize the differences in patients to which they will be applied, and they must respect the role of clinical judgment. Preliminary work suggests that a sound process to develop guidelines would include the following:

- Procedures (or patient problems) are selected for which it is reasonable to expect that the medical community can reach a reasonable degree of agreement on appropriate use. Given the limited resources available to develop guidelines, procedures are selected that are high in frequency, in risk to the patient, or in cost, and are likely to have substantial inappropriate use (underuse or overuse).

- A thorough review of the literature is undertaken to summarize available information about the procedure's safety, efficacy, and effectiveness--circumstances under which it is effective and ineffective, or even contraindicated. The review also determines how the procedure is or might be used.

- A structured consensus process is used to evaluate and clarify the scientific information from the literature, and to use reasoned expert opinion to supplement scientific knowledge. The consensus process will include respected physicians from a variety of backgrounds, and points of view about the appropriate use of the procedure. In particular, the process should not be dominated by those physicians who are expected to be advocates of the procedure. The consensus panels should also have available expertise in disciplines such as clinical decisionmaking, statistics, and research design.

- The process must recognize that definitive and specific judgments of appropriate or inappropriate care will not be possible in many cases. The limited base of knowledge and uncertainty about effectiveness of most procedures must be reflected in substantial grey areas where use cannot be determined to appropriate or inappropriate. For example, guidelines developed for the use of six procedures rated at least twenty percent of indications for use of each procedure as equivocal--neither clearly appropriate nor clearly inappropriate (Park et al., 1986).

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[20] As it becomes possible to do so, the evaluation is reversed: guidelines can be evaluated by their effects on medical care, and processes can be judged by guidelines developed with them.

- The guidelines must recognize and take account of variations among patients and their clinical problems. They should specify how differences among patients would affect the recommended use of services.

- The resulting guidelines must be made available for examination by a full spectrum of interested parties, including consumers, manufacturers, and payers as well as the members of the medical community. The content of the guidelines--the criteria by which use of a procedure is judged appropriate--must also be available to all interested parties, including the providers whose behavior is being judged. In other words, practice guidelines--particularly those used for external review--should not be "black boxes."

The sponsor of the process must be credible, impartial, and must be able to secure the participation of expert physicians. While guidelines must be developed primarily through expertise of expert physicians, those developed by particular physician groups could be biased by the vested interests of the group. On the other hand, payers and manufacturers may not be appropriate sponsors because payers have in interest in controlling costs, and manufacturers in the use of particular medical devices.

Several existing processes appear to have most of the desired features. Examples include that developed for the Health Services Utilization Study (Park et al., 1986; Merrick et al., 1987); and that developed for the Clinical Efficacy Assessment Project of the American College of Physicians (White and Ball, 1985; American College of Physicians, 1986).

The cost of developing guidelines varies with the process used. The cost for guidelines for one procedure developed by the American College of Physicians is estimated to be about $10,000 to $30,000 plus the value of many hours of volunteered time of participants. The cost of developing indications for a procedure using the process developed for the RAND Health Services Utilization Study is somewhat greater.

Guidelines must be updated to incorporate new information as medical knowledge grows. Their effects must be monitored once they are in use, and they must be modified appropriately.

Use of Guidelines

Guidelines can be used to inform physicians, patients, and other decisionmakers; to review use of services in utilization review and quality assessment; and to determine whether payment should be approved for proposed services or denied for unnecessary services. In each case, there is potential for impact on quality, efficiency, and cost of care.

To date, there is little information about the effects of practice guidelines in each of these uses. One study to assess the impact of the consensus statements from four Consensus Conferences of the National Institutes of Health concluded that though many physicians were aware of the statements, the effect on their behavior was small (Kosecoff, Kanouse, Rogers et al., 1987; Greer, 1987). Guidelines for the use of tests in the emergency department developed by the American College of Emergency Physicians were shown to improve use of the tests and to reduce costs (American College of Emergency Physicians, 1983).

Misuse of even the best guidelines can lead to poor care. Those applying them must recognize that because guidelines cannot anticipate every possible variation in patients' clinical characteristics, the attending physician's clinical judgment is crucial. Inflexible application of even the best guidelines could result in cookbook medicine--and poor clinical decisions. Flexible application is particularly important if guidelines are to be used in utilization review and to determine eligibility for payment.

Informing Physicians. Guidelines can be used to educate or inform physicians about current knowledge of the appropriate use of services. Many in the medical community advocate that this be their primary use. As noted above, several specialty societies have developed and made guidelines available to their members. Guidelines could also be used to inform patients or consumers, enabling them to be more effective partners in decisions about their care.[21]

Guidelines for the use of a procedure, and for the care of a patient problem can be used to inform or educate physicians. Since physicians are then free to interpret and use the guidelines with full knowledge of the needs and clinical characteristics of each patient, there is little danger that complex or narrowly-specified guidelines will be applied inflexibly.

Experience with programs to change physician behavior has identified several factors that affect the success of educational programs,[22] and has shown that it is difficult to change physician behavior through educational programs alone (Eisenberg, 1986; Schroeder, 1987). But the climate for acceptance and use of practice guidelines (and feedback of comparative utilization data) is changing. There is increasing recognition among physicians that some control over growth of expenditures is needed. It is also becoming clearer that there are services of little or no benefit that could be reduced with no threat to quality of care. Practice guidelines offer a sound means to selectively reduce unnecessary services. Further, they have a positive character that is consonant with the goals of physicians and patients to provide efficient care of good quality.[23] They offer physicians a way to take greater responsibility for quality and efficiency of care.

If medical societies take an active role in disseminating guidelines and persuading physicians to use them, guidelines are more likely to be effective. Guidelines used to inform physicians will be reinforced if they are also used as

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[21] Guidelines have seldom been used to inform beneficiaries or patients about the appropriate use of services. Consumer behavior may not come easily to patients, and particularly to Medicare beneficiaries (Hibbard and Weeks, 1987). Nevertheless, the potential for patient education to improve use of services should be explored.

[22] The factors (discussed earlier) include delivery of the information by a credible source, such as a medical society; providing specific feedback on the physician's performance and comparisons with peers; and coupling the program with incentives or penalties.

[23] Unlike utilization review and similar approaches to reducing unnecessary services, guidelines specify the *right* way to provide care rather than what is *wrong*.

the basis for review of utilization and quality. They may also provide a means for the physician community to respond constructively and effectively to expenditure targets (chapter 14) by reducing services of least benefit to patients.

Quality Assessment, Utilization Review, and Determination of Payment. As discussed in chapter 12, the criteria explicitly and implicitly used by PROs and carriers when reviewing utilization and quality need to be improved. Sound practice guidelines may provide the most promising way to improve the clinical basis of utilization review and quality assurance, making these processes more accurate.[24]

These applications may require guidelines different from those used to inform physicians about appropriate care, or require that guidelines be used differently. It must be emphasized that guidelines used for review and payment must be applied flexibly to take account of variation in clinical factors and local availability of medical resources, and must recognize the important role of the physician's clinical judgment.[25]

Guidelines that specify appropriate care for a patient problem may be less well suited for review than guidelines for use of a procedure. These guidelines are more complex. When they are used to inform physicians, the attending physician can use them with full knowledge of the individual characteristics of each patient's case. If they are used for utilization review, they must be adapted to incorporate the variation in patients (Greenfield, 1975). At least initially, these complex guidelines should probably be used only to provide information to physicians and patients, and not used as the basis of utilization review or to determine eligibility for payment. Inflexible application of guidelines in utilization review will result in denial of necessary care to beneficiaries as well as payment to physicians.

When used to review utilization and quality of care, or to determine payment, practice guidelines should be applied as screens to select cases for which services are more likely to be used inappropriately, with the final judgment reached through a subsequent process that takes additional factors into account.

Guidelines have long been a part of medical practice and have been accepted and used by physicians. If expenditures must be reduced, guidelines may be more acceptable than many current forms of utilization review because they are developed by physicians and reflect physicians' specification of good care.

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[24] For example, guidelines for use of procedures could be used by PROs in mandated preprocedure review of pacemakers and other elective procedures, or as an alternative to required second opinions.

[25] In the past, many suggested that guidelines should be developed and applied locally. It now seems appropriate to develop national guidelines, but to apply them with recognition of local factors. Not only are standards of care likely to be nationally uniform, but the expertise and resources required to develop sound guidelines are likely to be beyond the reach of most local organizations.

PRACTICE GUIDELINES: CONCLUSION AND WORK PLAN

Carefully developed guidelines can play a highly constructive role in the Medicare program. Practice guidelines may be unique among available methods to contain costs in that they can increase the quality and efficiency of care in the process of slowing increases in expenditures. Alone they cannot solve the problem of unnecessary services, or singlehandedly control the growth of expenditures. But they do complement other activities. They can provide the information physicians need to respond constructively to comparative feedback utilization data. They can form the basis of valid utilization review and quality assessment. They may provide one method for physicians to respond constructively to expenditure targets.

Simply recognizing the potential for practice guidelines will not cause them to be developed and used. What role can the Commission play to encourage and guide this process? First, the Commission plans over the next few months to prepare a paper elaborating the material in this chapter on processes to develop useful guidelines. It will circulate this paper to physician organizations, beneficiary organizations, experts in this field, and others. It will then convene a conference to help formulate a strategy to develop guidelines that will deal with issues such as what organizations should play key roles, how the process should be funded, what oversight should be conducted, how they should be disseminated to practicing physicians and beneficiaries, how to encourage their use by physicians, and how the guidelines should be used in the review of utilization and quality.

CHAPTER 14 EXPENDITURE TARGETS

Chapter 2 discussed the rapid increase in Part B expenditures that Medicare is experiencing despite its relatively effective means for controlling increases in the prices it pays for services.[1] Limitations on price do not appear to be an adequate mechanism for limiting expenditure increases to rates that many would consider affordable.

Previous chapters have discussed possible methods for addressing the rapidly increasing volume of services, the primary cause of the rapid expenditure increase. These methods include improved utilization review and expanded use of practice guidelines. This chapter considers the potential of a broad financial incentive for physicians to collectively restrain growth of Medicare expenditures. This incentive, embodied in a system of expenditure targets, could be used in conjunction with other techniques directed at the problem, or could be an alternative to them.

A system of expenditure targets would adjust the annual update in the unit prices paid to physicians (and possibly to other providers) in a geographic area based on how total Medicare expenditures in the area compared with a target. Targets would be set for per capita expenditures adjusted for age, sex, and other risk characteristics of the population and for the prices Medicare pays in the area.[2] The targets could be based on the rate of increase of expenditures, the level of expenditures, or a combination of the two. For example, the general update in the Medicare Economic Index might be 3 percent in a given year, but the actual update in each area could range from zero to 6 percent, depending on the rate of increase in adjusted per capita expenditures in the area in the previous year.

This chapter presents several examples of expenditure target systems. It outlines the major possible strengths and weaknesses of such systems covering Medicare payments to physicians and then discusses the feasibility problems and design issues they present. It concludes with directions for the Commission to take during the coming year.

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[1] Medicare achieves control of prices paid to physicians primarily by stipulating, most recently through annual legislation, the update in the Medicare Economic Index. The 1984-86 fee freeze was a more stringent means of controlling prices.

[2] Because expenditure targets cover the entire Medicare population of an area, selection bias is less of a concern than it is in the payment of health maintenance organizations (see chapter 16). Age and sex may, therefore, be adequate adjustors for risk. After adjustments for geographic differences in the risk characteristics of the Medicare enrollee population and in the prices that Medicare pays to providers, differences in per capita expenditures among areas tend to be similar to differences in per capita volume of services. Thus an expenditure target system is similar to a volume target system. However, expenditure targets offer incentives to provide services in low-cost settings (for example, on an outpatient basis rather than inpatient); volume targets do not.

GENERAL ANALYSIS

Expenditure targets might offer physicians greater clinical autonomy than other methods for addressing the problem of rapid expenditure growth. Reinhardt's Law points out that the less society controls the overall growth of health spending with broad mechanisms like expenditure targets, the more the private or public payer will intrude into the doctor-patient relationship, with less clinical freedom for physicians (Reinhardt, 1987). The intent of expenditure targets is to make explicit to physicians the limits of the resources society has decided to make available for health care, but to give physicians a great deal of autonomy in responding effectively to these limits. The alternative for moderating the growth of expenditures seems to be increasingly intrusive and annoying review of individual clinical decisions.

Expenditure targets could also begin to address the large geographic disparities in per capita Medicare expenditures that now exist. Per capita part B spending varies threefold among counties, even after taking account of differences in the age and sex composition of beneficiary populations, eliminating urban-rural differences, and excluding extreme cases.[3] For total Medicare spending, twofold disparities are found. Such large differences with no clear medical explanation raise questions about appropriateness of services provided as well as of equity for beneficiaries.[4]

Experience Abroad

Experience abroad offers several examples of how expenditure targets might work. The Canadian provinces, which operate the health insurance system that covers Canada's population, provide a number of relevant examples. In British Columbia the provincial medical association and the provincial government have negotiated a three-year agreement calling for expenditures for physicians' services to grow each year by no more than the increase in the fee schedule plus 3 percent.[5] If expenditure growth exceeds the target, the agreement calls

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[3] These comparisons are based on calculations underlying the Average Adjusted Per Capita Cost (AAPCC). The AAPCC is discussed in chapter 16.

[4] The variations in per capita spending described are largely due to variations in utilization of services rather than variations in the prices of services. The phenomenon of variations in the use of services and its implications for the appropriateness of care are discussed in chapter 13. The implications are not clear, but variations in the use of services have not been shown to result from differences in unnecessary use of services (Chassin et al, 1987).

[5] The target for increases in expenditures exceeds 3 percent each year by the amount of the increase in fees negotiated between the medical association and the government. The negotiated fee increase varies from year to year, but has been around 2 to 4 percent per year. The 3 percent allowed increase in the volume of services is to cover population growth projected at 1 percent per year, plus 2 percent a year intended to cover increases in per capita volume of services from factors such as advances in medical care. A provision of the agreement adjusts the 1 percent for population growth to match any actual increase in population.

for the British Columbia Medical Association (BCMA) to produce a plan for recovering the excess for the government. This has occurred and, in keeping with the BCMA's first such plan, physicians' fees were reduced by 4 percent for the four months from October 1987 to January 1988 to recoup the previous year's overrun of about 1 percent.

Utilization review activities are undertaken at the discretion of the BCMA. It has written to all physicians about procedures thought to be overused, resulting in a reduction in their use, and it has reduced fees for procedures it thought were overused because they were overpriced. It is not clear how effective these measures have been.

In Quebec, negotiations between the provincial government and the physicians' association explicitly focus on targets for average gross income of physicians. With a predictable physician supply, these income targets translate directly into targets for Quebec's total expenditures on physicians' services. A years' actual spending becomes a major factor in negotiations for the subsequent year, since adjustments for overruns of the target may be used to reduce the fee increase negotiated for the subsequent year.

In West Germany the expenditure target system underwent a major revision in 1985. In each state, representatives of insurers[6] and the physicians' association in the state now negotiate the amount that will be available for physicians' services to the insured population. They usually agree on an amount equal to the previous year's sum plus the percentage increase in average gross earnings of workers.[7] The insurers then turn this amount over to the physicians' association, which administers the payment system. Individual physicians bill the association for relative value units on a fee-for-service basis. The association pays according to a conversion factor set so that projected expenditures will equal the expenditure target. If billings at this fee level exceed the target, the conversion factor is reduced--usually for the subsequent year--to recoup the overrun.[8]

Incentives and Responses

Expenditure targets provide incentives for physicians as a group to control expenditures and the use of services. For this collective incentive to result in more appropriate use of services the physician community must develop responses that affect the behavior of individual physicians. These responses might range from peer pressure and more active support of the activities of peer review organizations to additional development and use of practice guidelines. Physicians could respond successfully to the incentive in two ways. They could constrain the rate of growth in the volume of services, and they could shift care to less costly but equally effective technologies and settings--for example, providing more care on an outpatient basis rather than in the hospital.

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[6] These "sick funds" or Krankenkassen are responsible for a quasi-public social insurance system that covers almost the entire population.

[7] This formula makes physician costs approximate a fixed percentage of payroll.

[8] The physicians' association also uses ex post statistical review of practice profiles to identify atypical physician practice patterns, such as unusual use of X-rays or prescriptions, that then become the subject of professional review.

Potential Gains and Problems

A system of Medicare expenditure targets might yield several major gains. It would provide a collective financial incentive to physicians to constrain growth in the volume of services and to provide care in the most cost-effective settings. Targets could also enhance the effectiveness of other measures directed at controlling the volume of services and at increasing cost-effectiveness in the delivery of care.

Expenditure targets would offer physicians opportunities for positive rewards for moderating increases in the volume of services, rather than just the threats of penalties from measures like utilization review. They could offer the medical profession increased clinical autonomy and greater recognition of its status as an autonomous profession. For beneficiaries, expenditure targets could bring a lower rate of increase in the Part B premium and in liability under coinsurance, even if physicians did not change their behavior and did not slow the rapid rate of increase in the volume of services. For taxpayers, expenditure targets could yield a slowing in the rate of increase in Part B costs.

To the extent that low payments contribute to the particularly low volume of care found in some areas, a system of expenditure targets could bring increased access to care. Finally, targets could result in increased equity for physicians collectively in the sense that physicians in areas where costs are under control would gain fee increases, and those in areas with costs most out of control would be most constrained by the system.

Several major problems of feasibility and desirability, however, are presented by any system of expenditure targets. Expenditure targets would provide a collective incentive to physicians to control the volume of services but might have little direct effect on individual physicians. If the physician community does not change the behavior of individual practitioners, control of the rate of increase of the volume of services will not be achieved. The resulting constraints on prices could make physicians more hostile to Medicare and might even encourage them to increase volume because prices were being held down.

If it reduced fees in some areas, an expenditure target system might increase balance billing in these areas, much as other constraints on fee increases might. Whether the system actually increased balance billing would depend on the rules that applied to balance billing when the targets were in effect and on whether physicians generally could control increases in the volume of services well enough to avoid constraints on fees.

Expenditure targets would be inequitable to individual physicians who practice economically but were located in areas with less economical patterns of medical care. Finally, current budget pressures might encourage the federal government to set targets too low.

Overall, the success of a system of expenditure targets would depend heavily on the ability of physicians as a group to respond constructively to its collective incentive to moderate growth in expenditures. Physicians must develop or support methods to constrain the use of services that are of little or no benefit to their patients. As discussed in the introduction to this part of the report, it is only through reducing services of least benefit that expenditure growth can be slowed without compromising the quality of care. Thus expenditure targets must be introduced cautiously to allow the profession to develop a constructive response.

Although some observers raise concerns that expenditure targets imply rationing of care, the targets would still allow far more care than is now provided in areas receiving relatively low volumes of care. Since expenditure targets increase payments in these areas, their effect may be to reallocate resources to underserved areas.

Medicare's volume of services continues to increase rapidly, and large geographic differences in adjusted per capita Medicare spending raise questions of equity and of unmet needs. The Commission will carefully analyze the potential and limitations of expenditure target systems to supplement other approaches to these problems.

FEASIBILITY AND DESIGN ISSUES

A number of important feasibility and design issues must be addressed in considering expenditure targets. This section describes them briefly.

Feasibility Problems

Two types of feasibility problems may preclude developing an effective expenditure target system. One is a matter of organizational effectiveness; the other involves data problems. Empirical studies can do much to identify the extent to which these problems actually would impede implementation. In the next year the Commission will try to determine how difficult the problems would be and the potential of measures aimed at overcoming them.

Effectiveness of Incentives. The incentives to control expenditures generated by a system of expenditure targets fall on physicians collectively. For individual physicians who can take on additional work the incentive to increase the number of services provided would still predominate over that to control volume.[9] Thus for expenditure targets to be effective, mechanisms must exist by which physicians as a group can affect the behavior of individual physicians. Physicians may not choose to put much effort into developing such mechanisms or may not succeed in attempts to develop them.

Discussions with the physician community might help identify promising mechanisms and what Medicare might do to foster them. One possible step Medicare could take would be to provide seed money for physician-initiated activities designed to respond to expenditure target incentives. In any case, Medicare will have to provide physician organizations with the data needed to assist their efforts to control volume and will need to respond effectively to their requests for information. Data on practice patterns will probably be the primary requirement. Physician organizations will also need to be able to

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[9] For an individual physician, increasing the volume of services increases income directly while producing only negligible cuts through the expenditure target system, since the effect of expenditure targets is to spread payment adjustments due to the one physician's increased volume across all physicians in an area. In contrast, for physicians collectively, expenditure targets can take away much or all of the increased income generated by increased volume.

exercise some influence on physicians disinclined to cooperate. Possible current legal barriers to actions by peer review and other physician organizations--particularly antitrust issues--need to be examined, and changes in some current laws may be required. Demonstrations would probably be helpful in identifying which response mechanisms actually work well, but demonstrations would require a number of years to provide answers.

Excessive haste in implementing a system of expenditure targets could reduce its effectiveness. The physician community must have adequate time to respond constructively to the new responsibilities under a system of expenditure targets. The new activities required and the possible need for new professional organizations mean the implementation of expenditure targets should be gradual.

Data Problems. Levels or rates of increase of per capita Medicare spending form the basic data for constructing expenditure targets. For targets to be sound, differences in the data among the geographic areas to which targets apply should reflect real differences, not differences that arise from statistical fluctuations or from problems in data collection or processing. However, data from the Health Care Financing Administration (HCFA) on average per capita Medicare spending have shown large, unexplained fluctuations over time in some counties. This is true even when the data average five years of spending in an attempt to dampen fluctuations.[10] Thus there are potential problems of data stability.

Some fluctuations in data for expenditures from small areas would be expected because of random variation in the amount of illness. These fluctuations tend to be smaller (in percentage terms) in more populous areas because the variations are averaged over a larger population base. However, some fluctuations in the HCFA data are due to problems in collecting and processing expenditure data. In particular, changes in the speed of claims processing have caused the HCFA data to include more or less than a full year's worth of incurred claims in a year's data on claims paid.

Currently, HCFA compiles data on per capita expenditures for small geographic areas for a given year about one and a half years after the close of the year. If this is the best that can be done, fee updates applied in a given year would have to be based on annual expenditures three years earlier.[11] For example, an update effective in calendar year 1988 would be based on expenditures in calendar year 1985. This seems too long a lag for incentives to have much effect, and too long for Medicare to respond to rapid changes in the volume of services.

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[10] The HCFA data in question are the AAPCC statistics used in reimbursing health maintenance organizations. The HMO industry has drawn attention to the unexplained fluctuations in these data. Chapter 16 provides additional discussion of the AAPCC data.

[11] As noted, many of the data problems involved in expenditure targets are very similar to those involved in capitation, some of which are discussed in chapter 16. However, the basic nature of expenditure targets calls for the use of actual data on expenditures, as indicated here, while the use of projections may be more appropriate in capitation payment.

However, the current state of Medicare data reflect a data system not designed to support expenditure targets. A redesigned system should be able to eliminate many problems. Private health insurers in the United States generally have nearly complete data available a few months after the end of a benefit year, and expenditure target systems abroad do not have data problems like those described above. Possibilities for obtaining needed data more rapidly and with fewer problems of fluctuation must be investigated. Carriers already produce fee screen updates that take effect only six months after the end of the period on which they are based, and expenditure targets might best be implemented through the carriers to take advantage of their data processing capabilities.

Design Issues

Expenditure target systems can take many forms. This section identifies some of the important choices and the considerations involved.

Which Payments to Adjust. Adjustments to unit prices based on expenditure targets could apply to all Medicare payments, to payments for physicians' services only, or to other subsets of Medicare payments.[12] Applying adjustments only to payments for physicians' services appears most promising for affecting the volume of services and expenditures because physicians have a relatively large measure of influence over them. This approach also avoids applying cuts or bonuses to providers who can do little to respond to the incentives of expenditure targets, since providers other than physicians have much less ability to affect the volume of services they deliver.

Basis for Expenditure Targets. An area's expenditure target could be based on a target rate of increase of expenditures, on the area's previous level of expenditures, or on a combination of the two.[13] Any of these types of targets can provide incentives to moderate the rate of growth of Medicare trust fund costs. However, only targets that depend on an area's previous level of expenditures provides a means to increase equity between areas with economical practice patterns and those with particularly high-cost practice patterns. And only these targets will create incentives for more services in areas with especially low utilization and create strong incentives in areas with especially high utilization to reduce it toward the norm.

For example, consider two areas, one with adjusted per capita utilization at the U.S. average and the other with utilization twice as high. Targets involving the level of expenditures would give strong incentives for the latter area to reduce its utilization toward the average. Targets involving the rate of increase of expenditures would tend to perpetuate the existing differences.

The reliability of data on rates of increase of expenditures may differ from that of data on levels of expenditures, therefore affecting the type of targets that are feasible.

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[12] The discussion here deals with which payments to adjust, not with which expenditures are included in the targets. They could differ. For example, adjustments to payments to physicians might be based on spending targets that include laboratory costs and hospital costs.

[13] The discussion here is of the targets themselves, not the adjustments derived from a comparison of actual spending with targets.

Adjusting Fee Updates or Fee Levels? Adjustments derived from expenditure targets could apply either to fee updates or to fee levels.[14] In the long term, the adjustments could have similar effects on actual fees paid. However, adjusting fee levels might well involve substantial reductions in fees in some localities. Adjustments in updates are likely to be less controversial, with the minimum increase being a fee freeze or a relatively small reduction in any given year.

Targets for Which Expenditures? The expenditures considered in adjusting payments to physicians might be either total per capita Medicare expenditures (Parts A and B combined) or per capita expenditures for physicians' services only. Physicians' decisions influence the volume of nonphysician services and expenditures for these services. For example, physicians make the decisions about hospitalization that determine hospital expenditures. Thus targets for physicians that covered total per capita Medicare expenditures (both Part A and Part B) would give physicians maximum flexibility in responding to incentives to limit the volume of services.

A target for total Medicare expenditures would establish a relatively strong financial incentive for treating patients in an ambulatory setting, since inpatient treatment is often more costly. Such an incentive may or may not be desirable from the perspective of the beneficiary, since shifts to outpatient settings often impose both explicit and implicit costs on patients and their families, and the effects on quality of care are unclear.[15] Also, most opportunities to safely move care to the outpatient setting may have already have been taken in response to the Prospective Payment System.

Setting Expenditure Targets. Setting expenditure targets promises to be a difficult process requiring decisions about the desirable rate of change in the volume of services or the desirable level of volume, matters about which there is little scientific evidence. Budget pressures will undoubtedly enter into the process.

For controlling the rate of increase in per capita expenditures, medical criteria would recommend a target greater than the rate of inflation. Advances in medicine permit progressively more to be done for patients, and these advances generally increase costs. However, fully accepting this technologically-based rationale for increases in targets implies that Medicare should generally pay for costly new treatments, an assumption that some dispute. Budget concerns and the rapid increase in the volume of services Medicare has experienced recently would argue for a target below that indicated solely by the progress of medical technology. Including these nontechnological concerns when setting expenditure targets would require careful consideration of the extent to which physicians should try to reduce previous rates of increase in which technological determinants presumably played the major role.

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[14] Here the discussion is of the adjustments derived from expenditure targets, not the targets.

[15] Peculiarities of Medicare coverage create further complexities for beneficiaries. For example, Medicare covers the cost of chemotherapy drugs in inpatient and physician office settings but not for home treatment, so it is financially disadvantageous for beneficiaries to undergo home treatment, although that might be the least costly option for Medicare.

Targets for expenditure levels might take the national average adjusted per capita expenditure as a norm to which the usual fee update applied. Areas with higher and lower per capita expenditures (generally corresponding to areas with higher and lower per capita volumes of services) would then receive smaller and larger fee increases, respectively. For example, if 3 percent were the national increase in a given year, that update would apply to areas with an average level of adjusted per capita expenditures--that is, to areas with a generally average per capita volume of services. Areas with a lower adjusted per capita Medicare expenditure level would receive larger increases, and areas with higher expenditures would receive smaller ones. However, the recent rapid rise in volume of services provided under Medicare may lead some to argue that the norm for volume of services should not be the U.S. average but a more economical style of practice, more like that achieved by HMOs that provide good quality care.

Relationship to a Fee Schedule. The introduction of an expenditure target system could precede, accompany, or follow the introduction of a fee schedule. No matter when expenditure targets went into effect, the options listed above with regard to the basis for targets and whether to adjust fee levels or fee updates remain open in principle. However, if the expenditure target system preceded a fee schedule, the practical choice would seem to be to adjust fee updates not fee levels. The complexities of current differences in fee levels, including differences among individual physicians in an area, make adjustments of fee levels impractical.

Adjusting fee levels before introducing a fee schedule also requires greater rationality in the current geographic differences in fee levels than the Commission has found (see chapter 8). Indeed, given the anomalies in the fees Medicare currently pays to physicians, applying adjustments derived from any expenditure target system before introducing a fee schedule would raise the objection that fine tuning is going on while the real need is for basic equity through a fee schedule.

Geographic Units. The geographic units to which expenditure targets could apply range in size from zip codes or counties (the latter are the smallest areas for which Medicare data now are regularly collected) to an entire region of the United States or the country as a whole.

Small areas involve relatively small numbers of physicians. Using them as the geographic units for expenditure targets would probably assist physicians in responding effectively to the collective incentives of expenditure targets. Indeed, hospitals seem almost ideal as "geographic units" from this standpoint since they have established physician organizations--the medical staff--and utilization review mechanisms. However, there is no defined population base for a hospital, and physicians often care for patients in more than one hospital. Thus data on per capita expenditures could not be developed on a hospital basis, and an expenditure target system applied to hospitals does not seem feasible.

Although very small areas are attractive in terms of aiding physicians to respond to incentives, two factors make them poor choices as geographic units for expenditure targets. First, the random statistical fluctuation in expenditures discussed above is more severe the smaller the population base involved. Second, patients often cross the boundaries of small units like counties when obtaining medical treatment. Using small areas as geographic units thus

threatens to generate extensive complications because of the difference between patients' home addresses (the practical basis for compiling the patient-based data used in computing per capita expenditures) and physicians' locations (the basis on which adjustments would be applied to physicians' fees). With larger geographic units, boundary crossing is less important.

Preliminary analysis suggests that in light of these two factors, counties are not good geographic units for an expenditure target system. Metropolitan areas and, in nonmetropolitan areas, a major substate region (or in less populous states the entire nonmetropolitan area of the state) appear to fit the requirements better. Further data analyses will lead to more specific information.

Using counties or states as the geographic unit might help the medical profession respond more effectively to the incentives expenditure targets generate because established physician organizations exist at the state and county level. Similarly, peer review organizations, currently charged with carrying out Medicare utilization review, generally cover an entire state, which again makes states an attractive unit for assisting the physician community to respond to incentives.

Using the entire United States as the unit for expenditure targets offers several advantages. National data are more quickly available and are less affected by period-to-period fluctuations than for smaller areas. Also, national expenditure targets would focus on the rate of increase in spending and avoid the complications involved in dealing with differences in levels of spending among geographic areas.[16] A national target would draw the attention of the profession to the problem of rapid increase in expenditures, although it would place responsibility for a constructive response on the national physician community rather than on the more cohesive groups in smaller areas.

Adjustments in All Areas or Only Selected Areas? Adjustments to physicians' fees resulting from expenditure targets could be applied solely in geographic areas with particularly high or low rates of increase in per capita expenditures or levels of expenditures, with no adjustments made in areas with intermediate rates of increase or expenditure levels. Areas with no adjustments to the general update would then be in the majority. Alternatively, adjustments could be applied in all areas, with those in areas with intermediate rates of increase or expenditure levels being relatively small. If adjustments applied in all areas, expenditure targets probably would have a much larger effect nationally in moderating the rate of increase in volume because the incentives they create would apply to a much larger base.

The strategy of special treatment for areas with extreme situations seems more appropriate in a model that uses targets based on both level and rate of increase of expenditures. In this model the nationwide norm for the physician fee update would be adjusted in most areas based on how the rate of increase of per capita expenditures in the area compared with a nationwide target. However, in areas with a particularly high level of per capita expenditures, the

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[16] Obviously, however, if these differences were judged to be a significant problem, national expenditure targets would leave it unsolved.

increase would be smaller. And areas with a particularly low level of per capita expenditures would receive a relatively large update regardless of the increase in the rate of expenditures since such an area already has a low level of expenditures and no need to control the volume of services.

Specialty-Specific Adjustments. A system of expenditure targets could have separate adjustments to fees based on separate targets for various types of services, rather than having a single adjustment for all physician services. For example, fees for radiology services could depend on actual expenditures for radiology services compared to an expenditure target specifically for those services. Such a target would apply to all radiology services, regardless of the actual specialty of the physician providing them. A group composed of practitioners who concentrate on providing a given type of service probably could affect its members' practice behavior more readily than a group composed of all physicians in the area.

However, targets specific to types of services would entail serious difficulties. For one, the volume of services of a given type depends only partly on the physicians who concentrate on such services. Radiology provides an excellent example. Much of the provision of radiology services is determined by nonradiologists seeking diagnostic and therapeutic services for their patients. Thus incentives based on a given type of service only partly narrow the set of physicians concerned. Second, using targets for specific types of services would multiply the difficulties of setting targets because several would be required in each area, and different rates of increase might be appropriate for different targets. For example, fields in which treatment or diagnostic possibilities were expanding rapidly might have more rapidly increasing targets. It will be difficult enough to set one overall target, and little is known about the "right" relative rate of growth of different types of services. Finally, including expenditures items other than physicians' services may be desirable in a system of expenditure targets, and attribution of expenditures on these items to targets for specific types of physicians' services presents difficulties and creates complications.[17]

CONCLUSION

Expenditure targets are a potentially promising means of addressing the problem of rapidly increasing Medicare expenditures through providing financial incentives to physician communities. Expenditure targets offer the possibility of increasing the clinical autonomy of the medical profession and relieving physicians from a growing array of review mechanisms that intrude into individual practice decisions. Expenditure targets could also improve equity for physicians in areas with differing volumes of service by setting more generous targets in areas with low per capita volume, and they might help beneficiaries in underserved areas to obtain more care. However, expenditure targets involve

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[17] Moreover, expenses for a patient's hospital stay would presumably be partly allocated among pathology, anesthesiology, and radiology services if these services were used by the patient. However, under PPS, data for this allocation are not readily available. Eliminating service-by-service payment of hospitals, which generally does generate such data, in favor of payment by the case is usually regarded as a major step forward in payment reform.

feasibility problems, particularly whether the medical profession could effectively translate their collective incentives into a response on the part of individual physicians. Technical assistance, particularly obtaining the necessary data, should be provided to help physicians succeed at this task.

The physician community will require time to develop the organizations and mechanisms needed to respond constructively. Important considerations of practicality and equity argue against intensive application of expenditure targets before introduction of a rationalized fee schedule. Many design issues need to be resolved. The most prominent include the mechanisms for setting targets and implementing adjustments, the relative importance given to targets for rates of increase in expenditures compared with targets focused on differences in the level of expenditures, and the geographic units to use.

In its work during the coming year the Commission will further evaluate feasibility problems, seeking the best means to overcome them. It will continue to analyze design issues, seeking to identify the best options. In light of this work, the Commission will again appraise the potential for expenditure targets as a component of a Medicare strategy to constrain growth in expenditures without compromising quality of care.

PART III

CAPITATION

Medicare payment for physicians' services and other medical services through capitation arrangements currently offers an alternative to the fee-for-service system for a relatively small segment of Medicare beneficiaries. But with the growth in the number and types of private health plans offering services on a per patient basis and increases in enrollment in such plans by the general population, the number of Medicare beneficiaries enrolled can also be expected to grow.

The Medicare capitation program is now limited primarily to health maintenance organizations (HMOs) and a limited number of competitive medical plans (CMPs) that are similar to HMOs.[1] Medicare has yet to fully explore the possibility of contracting with other types of private health plans and providers on a capitated basis.

There are four major types of HMOs: staff, group, network, and individual practice associations (IPAs).[2] In a staff model, some or all of the physicians are salaried employees of the HMO, and HMO patients make up virtually their entire practice. A group HMO is formed around a multispecialty group, and members are generally required to receive services from the physicians in the group. A group model that contracts with more than one multispecialty group is usually referred to as a network. IPAs contract with independent physicians practicing individually or in single specialty groups. These physicians usually have a significant number of patients who are not HMO enrollees.

HMOs have been in existence since the 1930s, but much of the growth in the HMO industry has occurred since the late 1970s. As of June 1987 there were 662 HMOs with a total membership of approximately 28.6 million (InterStudy, 1987b). Over 70 percent of these HMOs were less than five years old, but these younger HMOs accounted for about 30 percent of HMO membership.

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1 At present Medicare is permitted to enter into risk-sharing contracts with either eligible HMOs or CMPs. An eligible HMO is one that satisfies various qualifying provisions of the Public Health Service Act concerning organizational structure, provider contracts, health service delivery information, utilization review and quality assurance, grievance procedures, financial status, and marketing information. Eligible CMPs are private health plans that do not meet all the requirements for HMO qualification but do satisfy certain regulatory requirements, including the provision of physicians' services; laboratory, X-ray, emergency, and preventive services, out-of-area coverage; inpatient hospital services; receipt of compensation for services to enrolled members on a prepaid capitation basis; provision of physician services primarily through employees of the organization or through contracts with individual physicians or groups of physicians; and adequate provisions against the risk of insolvency. Throughout this part, HMO is used to refer to both HMOs and CMPs.

2 The term mixed model is frequently used to refer to an HMO that employs more than one of the three basic models (for example an HMO with both individual physician contracts and a group practice contract).

HMO enrollment is dominated by a limited number of very large plans. In mid-1987 there were 62 HMOs with enrollments of at least 100,000 members each, representing approximately 9 percent of all HMOs and 53 percent of total HMO enrollment (InterStudy, 1987b).

Early HMOs were either staff, group, or network models, and these types of plans still represent about 37 percent of HMOs and comprise 60 percent of total membership (InterStudy, 1987b). However, there has been rapid growth in both the number of IPAs and total membership in them during the last decade. Approximately two-thirds of all HMOs are now IPAs, and of those HMOs that are less than three years old, 80 percent are IPAs.

There has also been a trend toward the development of profit-seeking HMOs in recent years (InterStudy, 1987b). Of those HMOs less than three years old, 80 percent are profit seeking. Approximately two-thirds of all HMOs are profit seeking, but these plans account for only about 45 percent of total HMO enrollment.

Although Medicare has offered its beneficiaries the option of enrolling in qualified HMOs since the mid-1970s, not until 1985 was it permitted to pay HMOs on a capitation basis as an alternative to entering into cost-based contracts.[3] In general the capitation payment to an HMO is based on the estimated costs Medicare would have incurred had those beneficiaries who enrolled in the plan remained in the fee-for-service system, less a mandated 5 percent savings for the federal government. As of January 1, 1988, there were 110 HMO and 23 CMP risk-based contracts, serving about 3 percent of Medicare beneficiaries.[4]

As of December 1986, 20 percent of HMO risk-based contracts accounted for nearly 73 percent of all beneficiaries enrolled in risk-based HMOs (McMillan, Lubitz and Russell, 1987).[5] Approximately one-half of HMOs with risk-based contracts had total memberships of 50,000 or greater, and 53 percent were six years old or older (InterStudy, 1987a).[6] More Medicare enrollees are in IPAs (42. 3 percent) than in any other model, and IPAs accounted for about 56 percent of risk-based contracts (McMillan, Lubitz and Russell, 1987). More than 42 percent of risk-based contracts were with profit-seeking HMOs, and these contracts accounted for about 47 percent of all Medicare enrollees (McMillan, Lubitz and Russell, 1987).

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[3] The Tax Equity and Fiscal Responsibility Reform Act (TEFRA) of 1982 authorized Medicare to pay risk-sharing plans on a capitated basis, but regulations implementing the act were not published until January 1985.

[4] Most HMOs contracting with the Health Care Financing Administration to serve Medicare beneficiaries do hold TEFRA risk contracts, but as of January 1, 1988, there were 45 non-TEFRA contracts (examples include cost-based contracts and HMO demonstrations) covering approximately 196,000 beneficiaries. Data obtained from the Health Care Financing Administration, Qualifications Office.

[5] The number of TEFRA risk contracts is larger than the number of HMOs with risk-based contracts because in some instances an HMO may have more than one contract.

[6] InterStudy surveyed 121 HMOs having at least one risk-based contract as of December 1987. Four CMPs with risk-based contracts were not included in the survey.

HMOs have the potential to provide beneficiaries with certain advantages over the traditional fee-for-service system, most notably more appropriate health care, expanded benefit coverage, and reduced copayments. In the managed care environment of HMOs, improvements in the quality of care and reductions in total health care expenditures may be achieved by coordinating acute and chronic services, developing comprehensive quality assurance systems that encompass all levels and sites of care, eliminating unnecessary and potentially harmful hospitalizations, substituting less costly out-of-hospital services for inpatient services, and avoiding acute care episodes through the judicious use of preventive and rehabilitative services. For beneficiaries, HMOs' formal mechanisms for coordinating and monitoring services may lead to more appropriate health care, and the savings derived from more efficient delivery of services are intended to translate into expanded benefits or reduced out-of-pocket expenditures or both.

But HMOs also require beneficiaries to make certain trade-offs. A beneficiary's choice of physicians is for the most part limited to those participating in the HMO, and consultations with specialists must be requested by the beneficiary's designated primary care physician. Consequently, all enrollees lose some degree of freedom in the selection of a primary care physician and specialists. Also, beneficiaries joining a staff or group model HMO frequently must sever an established relationship with a non-HMO physician.

Potential problems with HMOs may arise from the financial risk incentives inherent in Medicare's capitated payment mechanism or from HMO efforts to provide necessary health services within a constrained resource environment. Under Medicare's capitated payment mechanism, HMOs have incentives to selectively enroll healthier beneficiaries and disenroll sicker ones. In some instances, access to necessary services may be diminished because of efforts to eliminate unnecessary services through the provision of financial risk incentives to physicians. Overall, the potential for barriers to access has increased in both the capitated and fee-for-service sectors as health care resources have become increasingly constrained.

The Medicare capitation program itself currently raises a number of concerns. Issues involving major policy directions include the definition of types of organizational entities (for example, federally qualified HMOs, Medicare insured groups) to be allowed to participate in the capitation program, the appropriateness of basing capitation payments on experience drawn from the fee-for-service sector, and the extent of government oversight required to protect the interests of beneficiaries. Issues involving program administration include the adequacy of the data currently used by HCFA to calculate per capita payments and the need for more detailed regulations to define appropriate marketing practices for HMOs.

Thus far the Commission has focused its efforts on selected issues pertaining to the quality of care in HMOs and aspects of the payment mechanism that may limit access to care. The potential for prepaid plans to improve the appropriateness and cost-effectiveness of patient care may not have been fully realized by all HMOs. Negative experiences with a limited number of Florida HMOs, one of which held a Medicare risk-sharing contract, have shaken the confidence of some members of Congress in both the ability of HCFA to manage its Prepaid Health Care Program and the system of checks and balances presumably present within the competitive market (U.S. House of Representatives, Select Committee on Aging, 1987).

Specific concerns regarding the quality of care include the possibility that services are underused as a result of physicians' financial risk arrangements and the adequacy of Medicare's current quality assurance activities. Opinions differ on the appropriateness of certain financial risk incentives to physicians and their effects on the provision of necessary services. HMOs may also have devoted inadequate attention and resources to developing effective quality assurance programs, monitoring patient satisfaction, and responding to patient grievances.

In addition, the prospective payment mechanism employed by HCFA to pay risk-sharing plans may fail to provide appropriate, equitable levels of payment to individual HMOs--the per capita payment level may be too high for some and too low for others. Calculation of an appropriate per capita payment is integral to the efficient and effective operation of a capitated system.

Although it has so far been possible to consider only a limited number of issues related to capitation, the Commission recognizes that important issues remain, including

- identification of problems associated with beneficiary disenrollment from HMOs because of contract termination or individual beneficiary preferences;
- identification of methods of monitoring beneficiary satisfaction and access to needed services within both the capitated and noncapitated sectors;
- assessment of the appropriateness of basing capitation payments on experience within the fee-for-service sector, and consideration of alternative capitation payment mechanisms; and
- identification of the characteristics (size, years of experience, organizational structure) of comprehensive, prepaid health care delivery organizations associated with the provision of quality, cost-effective health care, and critical assessment of the strengths and weaknesses associated with various types of organizations (for example, IPAs) that currently, or might in the future, participate in the Medicare risk-contracting program.

During the coming year, the Commission will begin to address these and other issues related to capitation.

This section of the Commission's report includes two chapters. Chapter 15 discusses the quality of patient care provided by risk-sharing HMOs and presents the Commission's recommendations to ensure adherence to high standards. Chapter 16 discusses payment issues--specifically, HMO incentives under the capitation payment mechanism to enroll the healthiest beneficiaries and disenroll the sickest, the appropriateness of geographic variation in capitation pricing, and the adequacy of the current actuarial process for estimating per capita payments.

CHAPTER 15 ISSUES RELATED TO QUALITY OF CARE IN HMOs

Although enrollees in health maintenance organizations are afforded many of the same safeguards as patients using the fee-for-service system, certain characteristics of HMOs may make them particularly vulnerable to underuse of necessary services. Specifically, some types of HMOs, such as independent practice associations, have decentralized management structures and provide services through numerous subcontracting mechanisms, thus making quality control more difficult. In addition, most HMOs put physicians at financial risk to encourage the cost-effective use of resources, and these arrangements may limit access to needed care.

Overall, the relevant literature has found that HMOs provide care of generally equivalent or superior quality to that received within the fee-for-service sector (Sloss et al., 1987; Ware et al., 1986). However, these analyses have usually focused on the nonelderly population and on large group or staff model HMOs in which reliance on strong financial risk incentives to control use of services is less common than in IPAs.

The specific objectives of this chapter are to discuss the quality review functions currently applicable to HMOs, to discuss the most recent findings on physician incentive arrangements and their likely effect on patient care, and to identify methods of improving the quality assurance processes and insuring that arrangements putting physicians at financial risk do not adversely affect quality.

CURRENT QUALITY ASSURANCE ACTIVITIES

Overall, patient care provided by HMOs to Medicare beneficiaries is subject to more extensive quality review than that provided within the fee-for-service sector. More extensive review may be justified. Because of "lock-in" arrangements, beneficiaries enrolled in HMOs are more restricted in their ability to change providers if dissatisfied than are beneficiaries within the fee-for-service sector. Also, the incentives inherent in the capitated payment mechanism are directed toward reducing use of services, thus increasing the likelihood of underuse. And as comprehensive health care providers, HMOs offer the opportunity to develop comprehensive quality review processes applicable to the entire illness episode.

In general, there are three major approaches to quality assessment. One is periodic inspection of various structural aspects of health care organizations believed to be associated with the provision of quality care--for instance, the existence of a well-designed and active internal quality assurance program or specialty board certification of physicians. Another approach is to monitor the process of care for a sample of cases to ensure adherence to appropriate standards that may be implicitly or explicitly formulated. Finally, quality may be assessed by measuring patient health status or the outcomes of care, such as mortality (Donabedian, 1980).

There is no clear consensus regarding the relative effectiveness of the approaches. Consequently, a well-designed quality assessment system should probably include examinations of structure, process, and outcome.

The quality of care delivered to Medicare beneficiaries by HMOs is subject to both internal review mechanisms established and carried out by the HMO and external mechanisms sponsored by the federal government or some other outside entity. Internal review mechanisms are usually carried out by the HMO's quality assurance program and focus on assessing the process and outcomes of patient care. External mechanisms may focus on structure, as do certification and accreditation processes, or process and outcome indicators, as do reviews of Peer Review Organizations (PROs).

Review of Structural Aspects of HMOs

The Medicare program has not conducted periodic reviews of HMOs' quality assurance programs. Before entering into a risk-sharing contract with an HMO, the Office of Prepaid Health Care (OPHC) of the Health Care Financing Administration (HCFA) does conduct a site visit, primarily to assess a plan's financial viability. The HMO's quality assurance system is also reviewed at this time. Subsequent reviews of a plan's quality assurance system have generally taken place only if concerns have arisen regarding some aspect of the plan's operations or if a plan requested an extension of its service area or qualification of a regional component. OPHC staff have indicated that efforts are now being made to review the quality assurance programs of HMOs with Medicare risk contracts annually.[1]

HCFA's external review of an HMO's internal quality assurance program is intended to ensure compliance with established guidelines. At present, HCFA's guidelines are very broad and specify that an HMO's quality assurance program should stress health outcomes, review the process of providing services, use systematic data collection of performance in patient results, interpret these data for practitioners, institute needed change, and include written procedures for taking appropriate remedial action.[2] More specific guidelines for quality assurance programs have been drafted by OPHC, but it is unclear whether these proposed guidelines will be adopted.[3]

In addition to the activities of the federal government, some plans partake in other external review processes that generally focus on the structural determinants of quality. For example, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has contracted with the state of Ohio to

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[1] There have been some important organizational changes within the Department of Health and Human Services pertaining to HMO oversight. Before June 1986 the Public Health Service was responsible for administering the HMO-related Social Security Act provisions of Title 13, federal qualification of HMOs and eligibility for Competitive Medical Plan (CMP) status, and the Health Care Financing Administration those of Title 18, Medicare contracting with HMOs and CMPs. These responsibilities are now consolidated within HCFA's Office of Prepaid Health Care. In addition, starting in mid-1987 Medicare contract applications from HMOs and CMPs have been reviewed and approved in OPHC's central office rather than in one of HCFA's ten regional offices. The impact of these changes on the oversight function is not yet clear.

[2] For HMOs, see Section 1301 (C) (7) of the Public Health Service Act; and 42 CFR 110.108(H). For CMPs, see *Federal Register*, January 10, 1985.

[3] The most recent draft of these guidelines is titled "Quality Assurance Guidelines For Health Maintenance Organizations and Competitive Medical Plans" (OPHC, HCFA, December 1987).

review HMOs that provide services to Medicaid beneficiaries and has recently signed a contract with Prudential Insurance Company to accredit company-sponsored plans. The National Committee for Quality Assurance (NCQA) and the Accreditation Association for Ambulatory Health Care (AAAHC) also conduct reviews of HMOs.[4] In addition, some state licensure programs include quality-related review processes.

Review of the Process and Outcomes of Patient Care

There are both internal and external reviews of the process and outcomes of patient care in HMOs. Internal reviews are usually carried out by an HMO's quality assurance program; external reviews are conducted by PROs.

Internal Review. In a survey of a sample of HMOs providing services to Medicare beneficiaries, Mathematica Policy Research identified serious limitations in some quality assurance programs.[5] Its report concluded, however, that the plans met HCFA's broad criteria for quality assurance programs despite the identified limitations.

In most of the HMOs in the Mathematica study, responsibility for the conduct of quality assurance activities resided with either the prepaid plan or the medical group. In staff model HMOs, accountability for both monitoring and problem solving resided with the plan. In group model HMOs, accountability for most quality assurance activities resided with the provider group, except for activities involving use of services, which were generally shared by the plan and the provider group. In individual practice associations (IPAs) the plan is usually responsible for monitoring activities, but problem solving and intervention are shared by the physicians and the plan.

Some of the HMOs reviewed by Mathematica lacked a well-defined quality assurance system. In others it was questionable whether the quality assurance system had been granted the necessary authority to carry out its responsibilities. Four of the 20 plans reviewed had no formal quality assurance committee; they relied instead on utilization controls, peer interaction, and patient complaints to maintain quality. In four other plans the quality assurance committee was placed below the utilization review committee within the overall organization of review committees, making it less likely that quality issues apart from those that also represented utilization problems for the plan would be emphasized. Physician representation on the quality assurance committees varied from 33 percent to 100 percent of committee members.

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[4] The National Committee for Quality Assurance is a review group established by the Group Health Association of America and the American Medical Care and Review Association. The Accreditation Association for Ambulatory Health Care's charter members include the American College Health Association, the Free Standing Ambulatory Surgical Association, the Medical Group Management Association, and the National Association of Community Health Centers.

[5] In 1984 and 1985 Mathematica Policy Research, under contract with HCFA, conducted site visits of 20 HMOs and CMPs participating in a Medicare capitation demonstration project at that time and documented the structure and design of their quality assurance programs (Mathematica Policy Research, 1987).

It is reasonable to assume that the limitations in HMOs' quality assurance programs identified in the Mathematica study still exist. HCFA's review process is unlikely to have produced any substantive changes in these programs, both because of the absence of a comprehensive set of specific guidelines and a lack of rigor in enforcing them.

External Review. The patient care provided by HMOs has recently become subject to review by Medicare PROs.[6] When fully implemented, this external review process will encompass both inpatient and outpatient services. At present, major PRO functions include a review of cases admitted to the hospital with one of thirteen selected conditions that may indicate substandard care (such as a ruptured appendix), a review of cases meeting certain criteria that generally indicate poor outcome (such as hospital readmissions, deaths, and transfers), and a review of randomly selected cases. In the future, PROs will monitor access to health care, in part through the conduct of surveys of beneficiaries enrolled in HMOs.[7]

The intensity of the PRO review is to vary depending on the adequacy of an HMO's internal quality assurance program. Upon request, PROs will conduct an assessment of the strength of an HMO's internal quality assurance program to determine initial eligibility for a limited case review process (that is, a smaller sample of cases is reviewed than under the basic case review process).[8] To date, few HMOs have opted to undergo this structural review process, accepting instead more extensive ongoing case review.

Improving Quality Assurance

The federal government's processes for reviewing the structure, process, and outcomes of patient care in HMOs could be improved. Currently, HMOs participating in the Medicare capitation program are subject to a government-sponsored review process having two major components: a review of the structure of a plan's quality assurance system and a detailed clinical review by

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[6] The Consolidated Budget Reconciliation Act passed in April 1986 provided for PRO review of HMOs. Subsequent modifications to this law opened up this Medicare HMO quality and utilization review process to competitive bidding by other types of organizations, sometimes referred to as quality review organizations. Most contracts for HMO review were awarded by HCFA in June 1987; only one of these contracts was with a non-PRO organization.

[7] Legislative provisions included in the Omnibus Budget Reconciliation Act of 1987 require PROs to determine whether enrollees have adequate access to health care services provided by or through the HMO or CMP. PRO assessment of accessibility is to be determined in part by a survey of enrollees who have not yet used the selected services.

[8] If an HMO is placed on limited case review, the PRO periodically assesses the adequacy of its quality assurance program by reviewing a subsample of those cases previously reviewed by the HMO's quality assurance program. If the internal case review process is found inadequate, the HMO is no longer eligible for limited case review. HMOs that do not apply or do not qualify for limited review are generally placed on basic review. But HMOs on either limited or basic review may be placed on intensified review if a certain number of problems are identified.

PROs of the medical care process and outcome for a selected sample of cases. The detailed clinical review performed by PROs represents a continuous monitoring process, which is still in the start-up phase.

Structure. The structural review, performed by OPHC staff with the assistance of some outside consultants, is based on very broad guidelines for compliance. For the most part these reviews have taken place only at the time of contract initiation, with no follow-up to ensure continued compliance.

More extensive assessments of the structural aspects of HMOs associated with the quality of care should be conducted. Such reviews should constitute a formal accreditation process that is conducted periodically. Establishing an accreditation process entails five major considerations: the type of entity that should conduct the reviews, the source of funds to support the review process, the frequency of the process, the adequacy of current OPHC guidelines regarding quality assurance programs, and the sanctions to be levied in the event of noncompliance with the guidelines.

To avoid conflicts of interest, external reviews should be conducted by an organization that is not directly involved in either policy development or program administration and whose primary mission is to assess quality (for example, the Joint Commission for the Accreditation of Healthcare Organizations, the National Committee for Quality Assurance, or the Accreditation Association for Ambulatory Health Care). In establishing a financial support mechanism for the accreditation process it will be important to ensure that the accreditation organization is accountable for safeguarding the interests of beneficiaries. The performance of the organization should be evaluated periodically by HCFA in accordance with predefined criteria.

In the interest of eliminating redundancy, it also seems appropriate to seek the cooperation, input, and endorsement of state governments, major private payers, and other payers with regard to the development of a single accreditation process. This process would replace the structural reviews of a plan's quality assurance plan currently performed by OPHC at the time of contract qualification, and the review by PROs to determine the appropriate level of ongoing case review. To be effective, the accreditation process should be far more comprehensive and stringent than current OPHC review processes.

It is particularly important to ensure that HMOs have strong active internal quality assurance programs. They should also establish institutional review boards to provide ongoing oversight for these programs, consisting of beneficiary and provider representatives both inside and outside the HMO. The accreditation process should provide for the review of the internal quality assurance system and the activities of the institutional review board.

Certain other aspects of an HMO's organization and operations also influence quality, including a governing body actively involved in making and implementing policy, a comprehensive medical record system, an effective process for coordinating and monitoring patient care, professional education programs, the availability of necessary emergency and urgent care services, a method of responding to patient complaints and resolving grievances, disclosure of relevant aspects of the plan's operations (such as the method of compensating physicians and the scope of benefits covered) to physicians and enrollees, and a method of assessing patient satisfaction. The accreditation process should be broad enough to encompass these and other aspects of an HMO's organization and operations in addition to internal quality assurance programs.

Such reviews need to be conducted regularly. The frequency of accreditation reviews should probably be based in part on an HMO's record of performance. HMOs having a serious deficiency should be reinspected within a relatively short time.

HCFA should adopt more specific and stringent guidelines that address identified areas of weakness, such as the absence of an appropriate committee structure or defined locus of responsibility for quality assurance activities, failure to coordinate and integrate the quality assurance activities of the plan with those of the provider group, or inadequate documentation of the quality assurance problems identified and the follow-up activities performed. More specific guidelines would help those involved in developing an accreditation process and individual HMOs seeking to make improvements. In addition to specific quality-related guidelines, HCFA, beneficiaries, and HMOs would probably benefit from the specification of procedures to be followed when a quality-related problem is identified by either the accrediting body or HCFA staff and a plan fails to take corrective action within a reasonable time. For example, failure to correct major quality-related problems within one year of the site visit might trigger the initiation of a Medicare contract termination process that includes measures to ensure adequate coverage of beneficiaries after contract termination.

During the coming year, the Commission will identify and evaluate alternative approaches for establishing an accreditation process. Specific recommendations will be developed regarding the type of entity to perform the accreditation, the source of funding, and the process for evaluating the performance of the accrediting body.

Process and Outcome. Improvements should be made to increase the effectiveness of the PRO program to assess the process and outcomes of patient care. Current PRO activities provide for an extensive review of medical practice. The effectiveness of the PRO process in stimulating improvements in the quality of care would be improved by developing standards and criteria for medical practice and an improved clinical data base.

Formal mechanisms should be established for the cooperative development and sharing of standards and criteria among PROs. Individual PROs now operate relatively independently, with each adopting its own local or regional criteria or standards for medical practice. Only limited efforts have been made to share locally developed standards and criteria among them.

The activities of the PROs might also be more effective if supported by well-defined risk-adjusted measures of outcome and a clinical data base and reporting system. Often when assessing outcomes and even the process of care, there are no standards against which to evaluate performance. Alternatively, measures of outcome must be defined and comparative data used to identify those processes associated with superior outcomes.

HMOs with Medicare risk contracts are now required to submit only a limited amount of data regarding their operations. They must submit uniform billing forms (UB82s) for those hospital episodes associated with enrolled Medicare beneficiaries, but because of problems at both the carrier and provider levels, the data is incomplete. Consequently, HCFA cannot assess measures of outcome such as mortality (during or after hospitalization) or readmissions, as is presently being done for non-HMO beneficiaries. HCFA staff are actively working to resolve these problems.

The utility of the UB82s is limited, however, because they do not provide adequate information on such items as admission status and complications of treatment so that comprehensive outcome assessments can be conducted. Improving their utility will require developing outcome measures that adjust for prior risk and submitting some additional clinical information (especially information pertaining to ambulatory care) on all or a sample of patients. It is important to make sure that any additional reporting requirements do not impose an unreasonable burden on HMOs, carriers, or intermediaries.

The issue of outcome measurement is also germane to the noncapitated sector, where there are legitimate concerns regarding the possibility of inappropriate utilization due to the incentives of either fee-for-service physician payment or the Prospective Payment System for hospitals. Consequently, measures of outcome and expanded reporting requirements should apply to all Medicare providers.

As indicated above, the Commission's review of quality-related issues has focused on the monitoring of the structure, process, and outcomes of care. During the coming year, work will continue on these issues for both the capitated and fee-for-service sectors, and efforts will also be made to address issues related to the accessibility of health care. In the capitated sector, ensuring appropriate access to health care is particularly important in light of possible incentives toward underuse as a result of limited resources and physician financial risk arrangements. Toward this end the Commission intends to consider alternative methods of monitoring accessibility at both the federal government and provider levels and to conduct an assessment of various access indices, including patient complaints, surveys of patient satisfaction, use of specialty and subspecialty services, out-of-plan service use, patient waiting times to receive necessary services, and systems for monitoring enrollment and disenrollment in organized health plans. The Commission will also assess alternative methods of increasing the availability of information to beneficiaries on an HMO's quality and accessibility.[9]

PHYSICIAN FINANCIAL RISK ARRANGEMENTS

The Omnibus Budget Reconciliation Act of 1986 prohibits risk-contracting HMOs and CMPs from knowingly making direct or indirect payments to physicians as an inducement to reduce or limit services to Medicare beneficiaries.[10] This law is to take effect in April 1990. However, Congress anticipates narrowing the scope of the prohibition and has requested HHS to review the types of financial risk arrangements in common use, to evaluate their potential to result in underutilization, and to make recommendations regarding possible exceptions to the law.

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[9] As noted previously, Congress recently expanded the PRO review of HMOs to include the monitoring of accessibility. HCFA is also developing a system to monitor and respond to inquiries and complaints from beneficiaries. The Commission will coordinate its activities related to accessibility with those of HCFA as appropriate.

[10] The prohibitions contained in the Omnibus Budget Reconciliation Act also apply to the use of physician financial incentive arrangements by hospitals. It was the use of these incentives that gave rise to congressional concerns regarding their implications for the quality of care.

It is undesirable to prohibit all forms of financial risk arrangements, as is the case with the current legislation, since financial incentives may represent an effective way to improve medical practice patterns. Wide variations in medical practice have been documented in the literature, indicating areas for improvement in the appropriateness of medical care (Wennberg and Gittelsohn, 1973; Chassin et al., 1986; McNeer et al., 1978; Loop et al., 1983). Thus far, attempts to modify physician practice patterns using nonfinancial approaches such as education and information feedback have enjoyed only limited success (Eisenberg, 1986).

As yet, little information is available on the effect of financial risk arrangements on the practice styles of physicians. Mathematica Policy Research is currently conducting a study to ascertain the relationship between the strength of a plan's financial incentives and the degree to which the plan's hospital use rate is less than the estimated rate for the fee-for-service Medicare beneficiaries in the HMO's service area, but results are not expected until June 1988 (Langwell and Nelson, 1987). Also, the study does not attempt to determine whether the use rates within the fee-for-service sector are appropriate or whether lower hospital use rates among HMOs represent inappropriate use. Consequently, there is likely to be disagreement regarding the interpretation of any study results.

Although it is difficult to substantiate their importance, the economic failure of some HMOs is frequently linked to the absence of strong financial risk incentives (Egdahl and Taft, 1986; Freund, 1987; Moore et al., 1983). Moreover, placing physicians individually or collectively at some degree of risk for the cost of patient care is integral to the concept of an HMO.

The Commission is, however, concerned about the potential for financial incentives to interfere with the provision of appropriate health services. Strong financial risk arrangements are of particular concern when used by IPAs. Their decentralized organizational structures make it more difficult to establish formal mechanisms for internal quality assessment and they are less amenable to informal peer review and pressure.

Current Use of Financial Incentives

Assessing the potential for current financial risk arrangements to adversely affect patient care requires information regarding the strength of the incentives. Patient care will probably not suffer from any type of financial incentive arrangement as long as the potential effect of the incentive on physician income is limited. Also, to the extent that financial risk incentives are linked to group performance rather than individual performance, the incentive for a physician to limit services inappropriately for any given patient is weaker.

A financial risk arrangement with strong incentives to decrease the use of services may not harm patient care if it is accompanied by a comprehensive quality assurance system or if it is implemented by an HMO whose structure and operations encourage active peer review. Indeed, incentive payments may significantly improve access and quality when they are a part of a system that evaluates physician performance in terms of the accessibility and quality of care as well as resource use. This approach, however, does assume the availability of precise and reliable measures of access and quality.[11]

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[11] As indicated earlier in this chapter, the Commission intends to conduct an assessment of alternative access indices during the coming year.

At present, descriptive information regarding financial risk arrangements is available from four surveys: the Group Health Association of America (GHAA) Survey, a survey conducted by Dr. Alan L. Hillman of the University of Pennsylvania, a survey conducted by ICF, Inc. under contract with HHS, and a survey by the American Medical Care and Review Organization (AMCRA).[12] All four surveys document widespread use of financial risk arrangements and a great deal of variability in their design.

Financial risk arrangements in IPAs usually apply only to primary care physicians, but in network, group, and staff models, financial risk arrangements frequently also apply to specialists. Of particular importance are those incentives applicable to the primary care physicians who generally assume overall responsibility for coordinating patient care.

The compensation package for a primary care physician generally consists of two components, a basic compensation method and an incentive arrangement. Overall, there appear to be three basic compensation methods for primary care physicians: fee for service, salary, and capitation. In general the incentives under fee for service encourage overuse of services, while those of capitation favor underuse. Salaried physicians face incentives that are relatively neutral in this regard.

There are many variations on each of the three basic means of compensation that may significantly alter incentives for utilization. Fee-for-service compensation is frequently accompanied by a withhold arrangement--a portion of each fee is withheld to cover any possible costs associated with greater-than-budgeted utilization levels. Salaried compensation arrangements may provide for bonuses or withholds. There are numerous ways of limiting the financial risks to primary care physicians under patient capitation arrangements: contracts with individual physicians may include a stop-loss provision; special provisions may be made to cover the costs associated with outlier patients; and certain services, such as inhospital care, may be paid for on a fee-for-service basis rather than covered by the capitation payment.

Analyzing the financial incentives of HMO physicians is further complicated by the fact that most group, network, and IPA models have a three-tiered organizational structure, consisting of the HMO plan, a medical group or organization, and individual physicians. In three-tiered HMOs, there are two layers of financial arrangements. For example, the plan may pay the medical group on the basis of capitation, while the medical group may pay individual physicians using salary or fee for service. Failure to distinguish adequately between these two layers of compensation has limited the usefulness of some of the surveys that have been conducted to document current financial risk arrangements.

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[12] The GHAA survey was distributed to GHAA members and to HMOs sponsored by Blue Cross/Blue Shield plans. Sixty-four percent (104 plans) of the members responded, and this was supplemented by an additional 71 Blue Cross/Blue Shield HMOs (Group Health Association of America, 1987). Dr. Hillman conducted a mail survey of 595 HMOs known to be in operation as of June 1986, and achieved a 51 percent response rate (Hillman, 1987). ICF, Inc. surveyed 215 federally qualified HMOs and CMPs (ICF, 1987). The survey by the American Medical Care and Review Organization elicited 51 responses from member HMOs. It is assumed that most of the respondents are IPAs, since they constitute the majority of AMCRA membership (American Medical Care and Review Organization, 1987).

Overall, the survey results indicate that the four types of HMOs differ both in their basic methods of compensating primary care physicians and in their use of such additional financial incentives as withholds or bonuses. In staff model HMOs the potential for physicians to increase their income through decreased service utilization tends to be limited. The GHAA survey found that almost 73 percent of staff model HMOs use only salary to pay primary care physicians. The remaining 27 percent use salary combined with either a capitation payment or some other payment method. Similarly, the Hillman study found that 79 percent of staff model HMOs rely primarily on salary-based payments to physicians or physician groups; only 3 percent reported that withholds were applied to individual primary care physicians. And although many staff models do provide additional payments to individual physicians based on performance, most do place limits on these bonuses.

IPA models rely more heavily on financial risk arrangements to control utilization than do staff, group, or network models. Two of the surveys found that IPA plans were particularly likely to use withholds or bonuses or both in their compensation plan for physicians (ICF, 1987; Group Health Association of America, 1987). However, the Hillman survey found that the basic method of compensating primary care physicians in IPAs was either capitation (43 percent) or fee for service (53 percent). In light of the large proportion of IPAs using fee for service as a basic compensation method, it is possible that withholds or bonuses are widely used to balance the incentives of fee-for-service compensation that encourage overutilization. The net effect of these divergent incentives is unclear.

For group and network models, the results of the surveys are particularly difficult to interpret because of the absence of complete information on the methods used by plans to compensate medical groups and individuals and the net effect of these layers of financial risk arrangements on physicians' income. The GHAA survey found that most group and network model HMOs use capitation to compensate primary care physicians or physician groups. The GHAA survey also found that capitation to compensate primary care physicians is used to some extent by nearly 14 percent of staff models, 13 percent of group models, 26 percent of network models, 73 percent of IPAs, and 43 percent of mixed models. The Hillman survey found capitation the main compensation method for network models, but the group model HMOs in the sample were split between fee for service, salary, and capitation. The Hillman survey found the use of bonuses and withholds commonplace in both group and network HMOs, while the GHAA survey results found far more limited use of bonuses and withholds in group models than in networks. As was the case with IPAs, the net effect of the various levels and components of compensation on income is unclear.

Three of the surveys queried respondents on the use of individual or group performance measures to distribute incentive payments to primary care physicians. The GHAA survey found that about 50 percent of the respondents used some individual measures of performance, and that individual performance measures were less common in group models. The Hillman survey found that only 18 percent of HMOs hold physicians at risk for withhold pool deficits on the basis of individual performance. The survey also found no association between placing physicians at risk as individuals and the type of plan. The ICF survey found that almost 17 percent of plans use measures of individual performance, and that plans with small groups tend to rely more heavily on individual measures of performance, while those with larger groups (more than 300 physician members) rely exclusively on aggregate measures of performance. The sponsors of these three surveys are collectively reviewing their survey instruments and results in an attempt to reconcile the differences.

In summary, the three surveys substantiate that it is common for HMOs, especially IPAs, to link physician compensation to patients' use of services. With their centralized structures, staff, group, and network models can rely more on direct managerial tools (such as utilization review) to control utilization, and peer group processes to reinforce quality and productivity standards. But financial risk arrangements are common in these types of HMOs as well. This implies that the current legislative prohibitions, scheduled to go into effect in 1990, would have far-reaching effects on HMOs.

Additional work is needed to quantify the possible effect of alternative compensation plans on income and to measure the effect of financial incentives on patterns of patient care. Efforts to quantify the possible effect of alternative compensation plans on physicians' incomes must consider the cumulative effect of the various levels of compensation within three-tiered plans and the various components of a physician compensation package (that is, the basic compensation method and the incentive arrangements). It is also important to remember that the effect of any particular type of compensation plan may vary depending on the strength of the incentive (the extent to which income may vary) and the type of HMO (for example, capitation payment may pose less of a threat to quality in group models than in IPAs).

To better understand the link between financial risk arrangements and patient care, both long-term and short-term analyses should be conducted. Over the long term the HMO industry and the federal government must identify methods of experimenting with alternative compensation arrangements and evaluating the effects of various incentives on patient care (for example, time series analyses to assess the impact of a change in compensation). In the short run, efforts should be made to identify measures of accessibility (appropriate and timely referrals to specialists, for example, or appropriate patterns of hospitalization) and continuity of care (HMO disenrollment, change of primary care provider) that can be used to identify deleterious effects on patient care possibly attributable to financial risk arrangements.

Options for Financial Risk Arrangements

The Commission is concerned about the potential for financial risk arrangements to have a deleterious effect on patient care. IPAs in particular rely heavily on capitated arrangements accompanied by withholds or bonuses to control utilization. Also of concern, however, is the need to encourage physicians to practice cost-effectively. Financial risk arrangements accompanied by strong quality assurance systems may accomplish this objective without diminishing the accessibility or quality of patient care. As noted earlier, studies of group and staff model HMOs have found the quality of care to be comparable to that in the fee-for-service sector, and financial risk incentives are frequently used in these types of HMOs.

At present, information is inadequate to make an informed decision on the appropriateness of legislative prohibitions against financial risk arrangements, and yet these arrangements may have a deleterious effect on the quality of care provided to beneficiaries. The prohibition of financial risk arrangements also has major implications for the participation of all types of HMOs in the Medicare risk contracting program. For these reasons the Commission intends to give further consideration to the issue of legislative prohibition of financial incentives during the coming year. At the same time, it recommends that some immediate actions be taken to protect beneficiaries.

With regard to legislative prohibition, it is imperative that analyses be conducted to identify both the potential income effect of alternative financial risk arrangements and the effect of financial incentives on patient care. Because of the multifaceted nature of most financial risk arrangements, it may not be possible to classify some of them, such as withholds, as acceptable and others as unacceptable. One suggested approach has been to allow a variety of incentives but to require that they be based on group performance and not on individual performance. This would encourage peer review and dilute the potential income effect associated with any single patient. This approach would seem to afford certain safeguards, but further analyses are required to identify the likelihood of eliminating inappropriate incentive arrangements while preserving appropriate ones.

Efforts should also be made to explore alternative methods of using financial incentives, either for individual physicians or groups, to encourage improvements in quality and to acknowledge and reward excellence in patient care. The development of broader definitions of physician performance that incorporate measures of quality and accessibility would make it possible to fine-tune financial risk arrangements to achieve and balance multiple objectives.

Any legislation or regulations intended to eliminate those arrangements likely to compromise the quality of care must be developed cautiously so as not to preclude many arrangements that HMOs depend on to discourage inappropriate use of health services. Unless modified, the current legislation will have a far-reaching, deleterious effect on HMOs and, consequently, beneficiaries. For this reason, after it completes additional analyses and before the implementation of legislative prohibitions scheduled for April 1990, the Commission plans to consider the desirability of establishing legislative prohibitions against certain compensation arrangements within HMOs.

Although the issue of legislative prohibition of certain financial risk arrangements will not be resolved for some time, the potential for financial incentives to adversely affect patient care warrants immediate consideration of alternative initiatives. HMOs should be required to provide potential enrollees and physicians with information on the nature of the plan's compensation arrangements. Also, consideration should be given to conducting regular reviews of each participating plan's physician compensation arrangements as one component of a periodic accreditation process.

Detailed disclosure of information to physicians would ensure that before joining a plan's medical staff or group, physicians would receive enough information to evaluate the appropriateness of the plan's compensation methods. Providing beneficiaries with information on the characteristics of an HMO that might influence patient care should lead to more informed decisions on whether to enroll and should place beneficiaries in a stronger position to recognize and challenge questionable practices.

A comprehensive review of an HMO's physician financial risk arrangements should be integrated into a periodic accreditation process. Addressing the compensation issue within the context of accreditation would allow the compensation plan to be considered in light of the HMO's quality assurance system. This approach is consistent with the view that physician financial risk arrangements constitute one very important characteristic of a prepaid plan that can help or hinder both the quality and efficiency of patient care.

In such a review, HMOs lacking the internal capability to define and monitor quality would be ordered to refrain from using strong financial incentives that might cause underutilization. HMOs relying heavily on financial incentives to control utilization would have to prove that the incentives do not encourage underutilization. HMOs with sophisticated quality assurance systems would be free to experiment with alternative incentive mechanisms. Their experience would improve our knowledge of the usefulness of financial risk arrangements in promoting appropriate practice patterns.

CONCLUSIONS

The Commission's review of the quality of care in HMOs has led to several key findings:

- All entities participating in the Medicare Risk Contracting Program should be subject to a periodic accreditation process that emphasizes the structural aspects of the prepaid plan, including internal quality assurance programs and physician financial risk arrangements. This accreditation process for at-risk plans should be established through a cooperative effort of the federal government, the state governments, major private health care payers, and capitated health plans. Careful consideration should be given to designating an appropriate entity or entities to perform the accreditation process and to developing a process for evaluating the performance of the accrediting entities.

- Regulations should be developed to require all entities with risk-sharing contracts to disclose to physicians and potential or actual enrollees appropriate information regarding their physician compensation methods.

- Further analyses are required to support decisions on legislative prohibition of some types of financial incentives to physicians. Specifically, information is needed on the effect of current HMO financial risk arrangements on physicians' incomes and the effect of financial incentives on decisions concerning the care of patients.

- The Commission intends to assess alternative methods of evaluating physician performance and to explore the possibility of linking financial incentives to various measures of quality and accessibility.

CHAPTER 16 ISSUES RELATED TO CAPITATION PAYMENT OF HMOs

Under the Tax Equity and Fiscal Responsibility Reform Act of 1982, HMOs receive a payment per enrollee that is set at 95 percent of the adjusted average per capita cost (AAPCC). The AAPCC represents "an estimate of the average per capita cost that would have been incurred by Medicare on behalf of each class of Medicare enrollee of the organization if that class of enrollee had received its covered services from providers and suppliers other than the eligible organization in the same or similar geographic area served by the organization" (*Federal Register*, 1985). At present, AAPCCs are adjusted for the enrollee's age, sex, and welfare and institutional status, and are county specific.

Dissatisfaction with the AAPCC payment mechanism is widespread, and in 1986, with the passage of the Omnibus Budget Reconciliation Act, Congress required the Secretary of Health and Human Services to identify methods of refining the AAPCC methodology. In response, HCFA provided support for the preparation of a technical report on the AAPCC by the actuarial firm of Milliman and Robertson, and convened a panel of experts to review the technical assessment, discuss possible solutions, and make recommendations (Milliman and Robertson, 1987). HCFA's report to Congress is in the final stages of review.

In assessing Medicare payment of HMOs, the Commission has focused its efforts on three major areas: the implications of biased-payment models for the total costs of the Medicare program and the future development of the capitated health sector; the effects of geographic variability in payments on the distribution of HMOs and Medicare beneficiaries' access to capitated health care plans; and the identification of possible technical and data-related problems associated with the current method of calculating payments to HMOs.

BIASED-PAYMENT MODELS

If Medicare beneficiaries enrolled in HMOs are generally healthier than their fee-for-service counterparts and the payment model fails to adequately adjust for differences in health status, aggregate payments to HMOs may exceed payments Medicare would have incurred had the beneficiaries remained in the fee-for-service system.[1] Furthermore, the use of such a biased-payment model that fails to adjust for differences in health status may limit access to HMOs for certain types of Medicare beneficiaries (for example, frail elderly); stifle efforts by some HMOs to develop specialized services for chronically ill patients, such as diabetic treatment programs; and have an adverse financial effect on particular HMOs (for example, IPAs that frequently enroll beneficiaries who have an established relationship with a physician and oftentimes a history of health problems).

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[1] As will be discussed later in this chapter, limitations of the current actuarial method used to calculate AAPCCs have resulted in systematic underpayment of HMOs. These underpayments, however, have probably served to offset the benefits HMOs as a group may have derived from biased payment.

Evidence of Biased Payment

There is evidence to indicate that Medicare beneficiaries in HMOs may on the average be healthier than their fee-for-service counterparts. This evidence is derived from three types of studies: analyses of recent HMO enrollees, analyses of HMO disenrollees, and analyses of individuals continuously enrolled in HMOs.

Comparisons of the pre-HMO utilization patterns of recent HMO enrollees with the patterns of nonmembers have generally found that HMO enrollees have a prior history of less use of health care (Buchanan and Cretin, 1986; Eggers, 1980; Eggers and Prihoda, 1982). This so-called enrollment bias may have two major explanations.

- Certain types of HMOs (staff, group) tend to attract people who do not have an established relationship with a physician and who have probably not experienced major illnesses (Berki et al., 1977). Indeed, there is some evidence to indicate that HMOs that do not require patients to change physicians (usually IPAs) do not benefit from biased payment (Eggers and Prihoda, 1982).

- Through administrative mechanisms, such as selective marketing practices or the omission of certain services, such as drugs, from benefit packages, some HMOs may actively discourage enrollment of those most likely to require extensive services.

Recent enrollees may also have been postponing care in anticipation of joining the HMO, and consequently utilization patterns during the first year in the HMO may reflect a backlog of unmet needs (Newhouse, 1986). One study that examined prior utilization patterns of HMO enrollees and non-HMO members over a longer period found that their utilization patterns differed the most during the period immediately before enrollment (Buchanan and Cretin, 1986).

Only limited information exists for patterns of disenrollment of Medicare beneficiaries, but Medicare disenrollees as a group may be less healthy and be heavier users of services (Rossiter et al., 1987). This finding runs contrary to the results of numerous studies of disenrollment patterns for HMO populations in general. Overall, these studies support the conclusion that disenrollees tend to be the healthier members of the HMO population.[2]

Although the weight of the evidence indicates that HMOs as a group benefit from biased payment, over time differences in health status between HMO enrollees and nonenrollees may narrow substantially. Several studies have concluded that there are probably only limited differences in health status between all HMO members (not just recent enrollees) and non-HMO members (Blumberg, 1984; Welch, 1985; Manning et al., 1984).[3]

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[2] For a review of the pertinent literature see Welch, 1985.

[3] On the surface, the results of a study conducted by the General Accounting Office seem to contradict the findings of others (General Accounting Office, July 1986). GAO found that HMO rates of mortality for Medicare enrollees (after adjusting for age group, sex, Medicaid eligibility, and institutional status) were only 77 percent of those in the fee-for-service sector. These results may differ from those of other studies because, although the GAO study did not focus specifically on new enrollees, the HMOs in the study were those participating in an HCFA demonstration project, and consequently most Medicare enrollees were probably recent entrants.

The narrowing of differences between two groups is sometimes referred to as regression toward the mean. Several studies have attempted to estimate the rate at which differences in use by HMO and non-HMO enrollees will dissipate. Although the findings indicate that as many as seven years may be required before the patterns become similar, it is apparent that patterns of lower preenrollment utilization for enrollees dissipate most rapidly during the first year of HMO enrollment (Beebe, 1987; Welch, 1985; General Accounting Office, July 1986).

Refinements to the Payment Mechanism

Alternative approaches to adjusting HMO payments to reflect enrollees' health status generally fall into two categories: direct measures of disease or dysfunction and indirect measures that generally rely on previous use of health services as a proxy for health status. Direct measures of health status include

- perceived health status;[4]
- functional health status measures such as the Activities of Daily Living or Institutional Activities of Daily Living;
- social and medical risk factors (risk factors for cancer, for instance, might include smoking and family history of cancer);[5] and
- physiologic measures, such as number and type of chronic conditions.

Possible indirect measures of health status include prior year standardized payments and prior year utilization measures, such as number of hospital episodes, Part B claims, and emergency room visits.

Several analyses have been conducted to compare the ability of available measures to predict future use of health services (Lubitz, 1987; Thomas and Lichtenstein, 1986; Lubitz et al., 1985). Measures of prior use of health services show greater predictive ability than direct measures of health status.

The major disadvantage of using an adjuster based on prior health services use to determine payment is the possibility of providing adverse incentives to providers. Linking future levels of payment to current levels of use may inadvertently dampen incentives to manage cases efficiently.

The potential for adverse incentives depends largely on the type of measure employed. In light of the discretionary nature of visits to physicians and emergency rooms, it would probably not be wise to use these measures for payment purposes, regardless of their predictive ability. Decisions regarding hospitalization are thought to be less discretionary, and consequently less

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[4] For an example of a perceived health status measure, see Thomas and Lichtenstein (1986).

[5] For a discussion of work in progress see Lubitz (1987) and Howland (1987).

subject to manipulation in response to reimbursement incentives, but basing future levels of payment on the occurrence of a hospital episode may still provide an incentive to an HMO to hospitalize marginal cases (Lubitz, 1987). Data on prior utilization, such as the number of hospitalizations, also do not discriminate between treatment for acute or chronic conditions. Use attributable to acute conditions generally does not indicate ongoing health needs and consequently should not result in increased future payments.

To address these and other issues, research has been conducted to develop a health status adjuster based on diagnostic information from prior hospitalizations that specifically identifies nondiscretionary hospitalizations for acute conditions and hospitalizations for the treatment of chronic illness (Anderson et al., 1986; Ash et al., undated). The most well-developed adjuster is currently the diagnostic cost groups (DCGs) developed by researchers at Boston and Brandeis Universities.[6] The DCG adjuster does not predict as well as those based on prior utilization only, but it does perform better than the current AAPCC formula (Lubitz, 1987).

In general, the DCG approach incorporates diagnostic information pertaining to the hospitalizations of an HMO's enrollees during a period before enrollment to determine Medicare payments to the HMO for the current year. Each enrollee is classified on the basis of, at most, one hospitalization--the one falling into the highest-cost DCG. Enrollees with no previous hospitalizations or hospitalizations of less than three days are assigned to DCG #0 along with those having only discretionary hospitalizations.

The payment to an HMO for a patient in a particular DCG will be derived from an estimate of the average Medicare payment associated with a similar group of fee-for-service patients in the same DCG. In general, HMOs will receive a lower payment for enrollees who are healthy and a higher payment for those who have had hospitalizations.

In the short run, DCGs represent a viable alternative for AAPCC health status adjustment. Only limited information is required for implementation, and the required data are readily available for all Medicare beneficiaries except those who have only recently become eligible. The HMO payment for new beneficiaries might initially be based on the average payment to the HMO for other beneficiaries. Alternatively, the necessary information for new beneficiaries could be obtained through use of a beneficiary questionnaire with follow-up verification of hospital records.

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[6] Originally there were ten DCGs, which were, in general, developed in three steps. Approximately 800 three-digit ICD-9-CM diagnostic classifications were aggregated into 78 diagnostic subgroups. Historical cost data for fee-for-service Medicare beneficiaries were then used to assign each of the 78 subgroups to one of nine DCGs on the basis of mean 1980 annualized Part A and Part B costs associated with the Medicare patients hospitalized in 1979 in each of the 78 groups. Diagnostic codes in each of the nine DCGs that might be associated with discretionary hospitalizations (for example, code 789: symptoms involving abdomen and pelvis) were reassigned to DCG #0 (Ash et al., undated). Recent adjustments to the DCG classification based on analyses of 1984 data reduced the total number to eight.

Beginning in May 1988, HCFA plans to conduct a small number of pilot demonstrations to assess administrative and operational aspects of the DCG payment mechanism (Administrator of the Health Care Financing Administration, 1987).[7] A final decision has not yet been made on whether a larger set of DCG demonstrations will be initiated by October 1988. HCFA is actively seeking to identify a sizable number of HMOs to participate voluntarily in these demonstration projects.

In light of what is already known about DCGs and the current need to address the problem of biased payment, implementation of a DCG adjustment should not be delayed for very long. The pilot demonstrations should identify any problems associated with implementation.

But while the pilot projects represent an important prerequisite to widespread adoption, the need for a second and larger set of demonstrations is questionable. Such demonstrations would probably delay industrywide implementation of a health status adjustment for several years. The demonstrations would also be costly, and the results might not be generalizable, for it is unlikely that HMOs volunteering to participate would be representative of HMOs with Medicare risk contracts as a group.

A limited amount of additional research to refine the tool would, however, be useful. DCGs were derived using fee-for-service data on the association between hospitalizations in one period and health care costs in a future period. But under capitation, providers have an incentive to substitute less costly out-of-hospital services for inpatient care whenever possible. If beneficiaries in the HMO sector are indeed less likely to be hospitalized (that is, less likely to be assigned to a higher-paying DCG), then within any given DCG the HMO enrollees will on the average be more seriously ill than their fee-for-service counterparts.[8] This may result in systematic underpayments to HMOs and a resulting tendency for them to mirror the hospitalization patterns of the fee-for-service sector.

To identify the magnitude of this potential problem, analyses should be conducted using both HMO data and fee-for-service data to assess the homogeneity of HMO and fee-for-service patients assigned to the same DCG. These analyses could be conducted using existing HMO data bases, such as those maintained by Kaiser Permanente. If systematic differences were identified, they could be used to adjust the DCG payment mechanism.

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[7] These pilot demonstrations are intended to work out such logistical details as processes for collecting and verifying primary and secondary diagnostic information on previous hospitalizations before and while the beneficiary is enrolled in the HMO.

[8] The effects of this potential problem have been minimized through efforts to identify, and assign to DCG #0, beneficiaries with only discretionary hospitalizations. However, even if it were possible to remove all discretionary hospitalizations, a recent study found that HMOs differ from the fee-for-service sector in hospitalization patterns for discretionary and nondiscretionary admissions (Siu et al., 1988).

DCGs should, however, be viewed only as a first-generation adjuster. As the Medicare population continues to grow and age, payment mechanisms to encourage HMOs to adopt innovative approaches for managing the chronically ill must be developed. Mechanisms such as DCGs that are based on prior use run the risk of perpetuating patterns of clinical practice and stifling desirable adaptations of the delivery system. Given this limitation of DCGs, direct measures of health status must be developed.

Direct measures of health status are needed to assess the efficiency and effectiveness of specific medical interventions, to assess the quality of care, to understand the causes and consequences of differences in health, to estimate the health needs of populations, and to improve clinical decisions (Ware et al., 1981). Also, as the proportion of beneficiaries selecting HMOs increases, costs within the fee-for-service sector become less appropriate as a benchmark for the derivation of HMO payments. In the future a payment mechanism based on direct measures of health status may be more appropriate.

In summary, a DCG adjustment to the AAPCC seems to represent the best short-term solution to reducing the bias inherent in the AAPCC demographic risk adjustment model. But implementation of DCGs should be accompanied by intensified efforts to detect inappropriate changes in practice patterns resulting from adverse incentives to hospitalize. Over the long run, more sophisticated measures of health status will be needed, and developing them represents a high priority for research funding.

GEOGRAPHIC VARIABILITY

Another concern regarding the Medicare risk contracting system has to do with the geographic variability of payments. As noted above, adjusted average per capita costs (AAPCCs) are county-specific and are estimated from past health services payments for Medicare beneficiaries cared for in the fee-for-service sector. Payments across counties vary substantially: the 1988 standardized per capita rate for aged beneficiaries is $116.48 in Apache County, Arizona, for example, but $385.84 in Dade County (Miami), Florida.

Geographic variability in fee-for-service payments and consequently in AAPCCs may result either from differences in the prices of individual medical services or differences in the use of services. Differences in the prices result mostly from differences in hospital and physician charges. The portion of variability in the AAPCC attributable to price differences is generally appropriate, because HMOs usually compete within the same local market as fee-for-service providers.[9] Differences in the use of services are probably caused by the variability in physicians' practice patterns, differences in the health status of beneficiaries and consequently the need for services, and differences in the degree to which a population's need for services has been satisfied through the

[9] Chapter 8 discusses the appropriateness of geographic price variations and of steps to reduce it. Any policy changes in the fee-for-service sector would automatically be reflected in the AAPCC.

fee-for-service system. Small geographic variations in physicians' practice patterns have been documented extensively in the literature, so far with little consensus as to their appropriateness (American Medical Association, 1986a; Chassin et al., 1987). Problems of definition and measurement make it difficult to identify variations attributable to differences in health status or unmet need.[10]

The degree to which the variability in AAPCCs may stem from differences in historical patterns of unmet need across counties poses a serious concern for the federal government. Through the passage of TEFRA in 1982, Congress intended to provide Medicare beneficiaries with expanded health care options. But unless AAPCC payments are adequate to support care for the average beneficiary, HMOs will be reluctant to provide comprehensive health services to Medicare beneficiaries. Consequently, beneficiary access to HMOs will be limited.

The level of the AAPCC may indeed represent an important consideration in HMOs' decisions to participate in the Medicare program. A study of the 52 HMOs that participated in the HCFA at-risk payment demonstrations in 1982 documented significant differences in participation by geographic area (Adamache and Rossiter, 1986). Analysis of market and organizational characteristics likely to affect decisions to enter into risk contracts revealed that HMOs in areas with a high AAPCC were more likely to enter the Medicare market, suggesting that variations in AAPCC payments do more than reflect differences in medical prices.

Geographic areas with higher AAPCCs probably afford HMOs greater opportunities to achieve economies over the fee-for-service system. A higher AAPCC to some extent reflects provision of a greater volume of services, and HMOs achieve savings over the fee-for-service system in part by substituting ambulatory for hospital services. This implies that HMOs may not develop in those areas where accessibility to services is low because of financial or other barriers. This is unfortunate since HMOs, through reduced copayments, offer distinct advantages to low-income beneficiaries.[11]

In the interest of encouraging increased HMO enrollment of Medicare beneficiaries, and ensuring access to HMOs for all beneficiaries, it may be desirable to establish a lower limit on AAPCC payments: if the AAPCC rates for each county (or other geographic unit, as appropriate) were adjusted to remove that portion of variability attributable to differences in the prices of medical services, a lower limit could be set equal to an amount that is some percentage below this price-adjusted mean AAPCC. In this way it should be possible to guard against inappropriately low payments to geographic areas stemming from differences in unmet need. During the coming year, the Commission will develop a methodology for price-adjusting the AAPCCs and will assess the impact of alternative methods of establishing a floor.

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[10] For further discussion of issues related to geographic variability, see chapter 8.

[11] A study by Mathematica Policy Research found that beneficiaries experiencing low access to health services were more likely to join an HMO than those not experiencing barriers to access (Brown and Langwell, 1987).

Another issue related to geographic variability involves the use of counties, which are essentially geopolitical boundaries, as the unit of analysis. Because some counties have small Medicare populations, their AAPCCs vary greatly from one year to the next, which makes it difficult for HMOs in these counties to manage their operations effectively. Counties may also not necessarily correspond to HMO market areas. Because some contain both rural and urban areas, and the expected costs of health care for the two may be quite different, a single level of payment may not be appropriate. In other instances an HMO may serve enrollees from different counties having very different AAPCCs, and yet the expected costs to the HMO per enrollee do not vary with the enrollee's county of residence.

HCFA is currently considering the possibility of changing the unit used in the AAPCC calculations from counties to aggregations of zip codes that will more closely represent medical markets or service delivery areas. An alternative suggestion is that three types of areas be identified for purposes of payment--urban core, suburban ring, and rural (Welch, 1987).

A change in the definition of a geographic unit will probably not adequately address the issue of geographic variability due to unmet need. It is, however, important that efforts be made to identify a more appropriate geographic unit that will enhance the stability and equity of payments to HMOs.

THE METHOD OF CALCULATING PAYMENTS

The AAPCC estimation process has suffered from a lack of current data, erroneous economic assumptions, and serious methodological problems; the result has been chronic underestimation of the per capita rate. A recent study conducted as a part of the HCFA evaluation of the AAPCC estimated that HMOs actually received about 90 percent of the AAPCC in 1987 and about 92 percent in 1986 (Milliman and Robertson, 1987).

Although the Commission intentionally limited its scope to the consideration of two major payment issues--biased-payment models and geographic variation--it is apparent from the evaluations conducted by HCFA and others that there are other serious deficiencies in the approach currently used to calculate AAPCCs. The potential for these deficiencies to harm some or all HMOs increases as refinements are made to remove any inappropriate slack in the payment mechanism. Consequently, major technical and data-related problems associated with the calculation of AAPCCs must be resolved before a health status adjustment is implemented.

Current concerns regarding the calculation of Medicare's per capita payments to HMOs include

- the accuracy, fairness, and appropriateness of current demographic adjustments based on welfare eligibility and institutional status;
- possible misstatement of the AAPCCs in counties having low rates of supplemental coverage (that is, Medigap coverage), substantial populations of working aged and aged persons with dual entitlement such as those eligible for services through the Veterans Administration, and a significant degree of beneficiary migration;

- o systematic underbias in the United States Per Capita Cost, from which the AAPCCs are derived, resulting from the use of incomplete data and inappropriate assumptions when estimating program outlays;[12] and

- o the appropriateness of including costs associated with medical education and indigent care in the calculation of payments to those HMOs that do not participate in medical education programs, make limited use of teaching hospitals, or generally do not provide uncompensated care.

Many of these and other potential problems with the current payment methodology have been acknowledged by the AAPCC Task Force established by HCFA and will presumably be addressed in the agency's forthcoming report to Congress. Issues related to the AAPCC are also the focus of a study being conducted by the General Accounting Office (GAO) in accordance with the provisions of the Omnibus Budget Reconciliation Act of 1987. During the coming year the Commission will evaluate the progress made by both HCFA and GAO in identifying and resolving problems related to the calculation of the AAPCCs, and assess the need for further analyses and refinements.

CONCLUSIONS

In light of the serious problems posed by biased payment methods and the need to develop a more predictable, equitable payment system, the Commission recommends that steps be taken to implement immediate and long-term refinements to the TEFRA payment system.

- o A limited amount of additional research on diagnostic cost groups should be conducted using existing HMO and fee-for-service data to identify and resolve any problems arising from different patterns of hospitalization between the fee-for-service and capitated sectors.

- o If this additional research indicates that the incorporation of a diagnostic cost group adjustment would reduce the bias inherent in, and enhance the stability of, the HMO payment system, the current HMO/CMP payment model should be modified to incorporate a diagnostic cost group adjustment immediately after completion of HCFA's limited pilot demonstrations.

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[12] Chapter 14 provides a discussion of issues related to the use of expenditure targets. Such targets would provide strong incentives for providers in a geographic area to make sure that actual expenditures do not exceed budgeted expenditures. Consequently, if expenditure targets are implemented, there should be a greater correspondence between projected and actual expenditures within the fee-for-service sector, thus improving the accuracy of per capita payments (that are derived from estimates of future fee-for-service payments) and decreasing the variability in payments from year to year.

- o A high priority for 1988-89 should be to conduct research projects to develop direct measures of health status that will undergird future enhancements to the TEFRA payment system and provide a basis for measuring beneficiary outcomes.

It is also important that incorporating a diagnostic cost group adjustment to the AAPCC be done in concert with improvements in the actuarial process used to calculate Medicare payments to HMOs, since this process currently has the potential to distort payment levels seriously.

The Commission's findings also indicate that geographic variability in payments has probably influenced HMO decisions to enter into Medicare risk-sharing contracts and resulted in limited access to HMOs by beneficiaries in certain geographic areas. To address this problem, a floor or lower limit should be established for county-specific payments. During the coming year the Commission will assess the impact of alternative methods of establishing such a floor on payments.

PART IV

DATA

The expanded activities of the Medicare program in recent years have placed considerable strain on the Medicare data system, making it imperative to coordinate demands and set priorities among the activities. The Medicare program has become increasingly involved in the evaluation and modification of current delivery and financing mechanisms, such as identification of the explanatory factors for growth in Part B expenditures, identification of overpriced procedures, and movement from cost-based to prospective payment for hospitals. The program is also involved in monitoring the accessibility, quality, and efficiency of patient care--actual or planned activities of peer review organizations with regard to hospitals, health maintenance organizations, and physician services. Both short- and long-term modifications in the Medicare data system are required to support these activities.

The Commission is currently engaged in developmental work for implementing an alternative physician payment mechanism. A fee schedule for physician services is under development, and analyses are being conducted to explore the possibility of establishing expenditure targets. If these are implemented, some changes in the Medicare data system will be necessary, especially the Part B component.

A fee schedule may necessitate changes in the definition of certain types of data currently collected, such as the designation of physician specialties, and the collection of new types of data, such as identifying the physician providing the service. Under a fee schedule it may also be possible to eliminate some types of data currently included in the Part B data system--prevailing charge information, for example.

Putting an expenditure target program into effect is likely to involve designating certain geographic boundaries and collecting data specific to these geographic units. It may also be important to modify the data system process to ensure the timely availability of data necessary to make adjustments in future targets.

Regardless of the types of changes in the payment mechanism, certain modifications in the current data system will be necessary to monitor and evaluate the impact of alternative delivery and financing systems on the accessibility, cost, and quality of care provided to beneficiaries. The Medicare program must be able to ensure that beneficiaries are receiving appropriate medical care.

The ability of the Health Care Financing Administration, carriers, beneficiaries, and practitioners and suppliers to respond to changing data requirements is important in assessing the feasibility of any alternative payment mechanism and establishing a schedule for implementation. Data system changes involving the submission of additional data, the redefinition of currently submitted data, or the modification of file layouts to facilitate retrieval may require several years or more to implement and may involve substantial expenditures. Consequently, thorough advance planning, undergirded by realistic goals, is a prerequisite.

Chapter 17 provides a discussion of a strategic planning process to be conducted by the Commission during the coming year to identify the specific changes in the Medicare Part B data system required to support the various physician payment mechanisms under consideration.[1] Proposed changes to the Medicare Part B data system will be evaluated in terms of their impact on beneficiaries, practitioners/suppliers, carriers, and HCFA. Recommendations regarding changes to the system will be made after careful consideration of all associated costs and benefits.

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[1] The Omnibus Budget Reconciliation Act of 1987 requires the Department of Health and Human Services to conduct a study of the changes in the payment system that would be required to implement a national fee schedule. The Commission's work with regard to data system planning will be coordinated with HHS's efforts to identify any major technical problems that may impede a transition to a fee schedule.

CHAPTER 17 MEDICARE PART B DATA REQUIREMENTS: PLANNING FOR THE FUTURE

This chapter of the Commission's report has three major objectives: to provide background information on the Medicare data system, especially that component applicable to Part B services; to identify and discuss the major users and applications of Part B data; and to describe the Commission's fiscal year 1988 work plan to provide for future data requirements.

THE MEDICARE DATA SYSTEM

The Medicare data system consists of hundreds of files on beneficiaries, practitioners, contractors, claims, and various aspects of program administration (such as financial records and CPT-4 records). These files may reside with Medicare carriers, intermediaries, and at HCFA regional or central offices.[1] In general there are two distinct data system components, one pertaining to Medicare Part A operations and another to Part B.[2] The Part B component is of greatest interest to the Commission.

Medicare Part B System Component

The major inputs to the Medicare Part B system component are those data required of practitioners, suppliers, or beneficiaries of Part B covered services to obtain fee-for-service payments. Payment for services furnished by a physician is made either to the physician who provided the services on the basis of assignment (under the terms of which the reasonable charges as determined by the carrier are the full payment for the services) or to the beneficiary.[3]

Assigned claims are submitted by physicians (on HCFA-1500, the health insurance claim form) and include patient identification information, diagnostic information, procedures performed, medical services and supplies provided, and charges. Claim forms submitted to elicit payments to beneficiaries (on HCFA-1490S, the patient's request for Medicare payment form) contain only limited information, primarily concerning beneficiary eligibility under other public or

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[1] For a brief description of many of these files and data sets, see Bureau of Data Management and Strategy (May 1986).

[2] Payment for certain services provided by hospital outpatient departments and home health agencies are covered under Medicare Part B but are processed in a manner that is similar to that for Part A services. Discussions in this chapter pertaining to the Part B data system are not applicable to these services.

[3] Part B services provided by HMOs with risk contracts are not billed for on a fee-for-service basis and consequently are not reflected in the Part B system component.

private insurance or health plan programs and the nature, of the illness or injury for which treatment was received. These claims are, however, accompanied by itemized bills from physicians.[4]

In fiscal year 1987 more than 337 million Part B claims were processed nationwide.[5] Approximately 72 percent of these represented assigned claims and 28 percent unassigned claims.

HCFA has contracted with 36 carriers to perform various Part B payment-related functions, and overall there is a great deal of diversity across carriers. Major carrier functions include: processing claims submitted by beneficiaries, practitioners, and suppliers; responding to inquiries from beneficiaries, practitioners, and suppliers; conducting medical necessity reviews; monitoring for fraud and abuse; and enrolling participating physicians.

Starting in 1984 carriers have also been required to prepare specific data files for HCFA on an annual basis. These national files are known as the Part B Medicare Annual Data System (BMAD). Carriers' inputs to BMAD consist of four major files.[6]

- The procedure file provides calendar year data by procedure code for every procedure processed by the carrier in the year. Data from 100 percent of claims are used to generate procedure-specific volume and charge information by locality, specialty, type of service, and place of service.

- The prevailing charge file contains prevailing charges by procedure code. The prevailing charges are used by carriers to determine payment under the customary, prevailing, and reasonable (CPR) method of payment.

- The provider file reports the claim history calendar year data for all services rendered by a 5 percent sample of active practitioners and suppliers.

- The beneficiary file reports the claim history of all services provided in the calendar year for a 5 percent sample of beneficiaries.

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[4] Unassigned 1490S claims may be prepared by providers or by beneficiaries with varying degrees of assistance from providers. Some unassigned claims are prepared by providers on behalf of beneficiaries and are submitted on HCFA-1500 claim forms (HCFA-1500 forms do provide a place to indicate whether the claim is assigned or unassigned). These unassigned claims are treated the same as HCFA-1490S claims.

[5] Data provided by the Health Care Financing Administration, Bureau of Quality Control.

[6] The following information was extracted from descriptive information provided by HCFA, Bureau of Data Management and Strategy.

BMAD was created to support national studies on variations in practitioners' and suppliers' charges, volume of services, and practice patterns, and to assist in the development and evaluation of alternative payment methodologies.

Although the Medicare program's operational and data-related functions are separate for Part A and Part B, recent developments have made it possible to obtain beneficiary-specific claims information for Part A and Part B services from a single integrated data system. The Medicare Automated Data Retrieval System (MADRS), which covers all beneficiaries for service years 1984 and forward, includes selected fields from inpatient hospital, inpatient skilled nursing facility, outpatient, home health agency, and hospice claims, and summary data from Part B practitioner and supplier claims.[7] MADRS greatly facilitates the retrieval of beneficiary-level data. The system is particularly useful when analyzing episodes of illness or estimating the magnitude of shifts in the site of care from inpatient to outpatient.

Part B Data Limitations

Limitations of the current Part B data component include the absence of or failure by carriers to adhere to uniform definitions of certain data elements, inaccurate or incomplete data or both, delays in the availability of data, and difficulties in obtaining longitudinal data. In addition to problems with the current data system, a number of users have recommended expanding the system to include additional data elements and improving linkages between the Part B data system and other systems such as Part A or Medicaid.

Definitions of Data Elements. The processing of Part B Medicare claims is a highly decentralized operation and consequently is subject to variability in interpretation and performance. With the recent development of BMAD the lack of uniformity in carrier operations became particularly visible. Examples of data elements in the current BMAD files that are of limited use because of variations in carrier coding practices include physician specialty codes and procedure codes.

For BMAD reporting, HCFA has developed a list of specialty codes to be used by carriers. For purposes of calculating payments (that is, developing profiles to establish prevailing charges), however, carriers generally use their own specialty coding systems. Some carriers make no payment distinctions based on specialty; others recognize many specialties and subspecialties.[8]

For purposes of BMAD, carrier-specific specialty codes must be mapped to HCFA specialty codes. This conversion process is not always straightforward and is consequently prone to error. The use of carrier-specific specialty codes also limits the ability to compare prevailing charges among localities and to

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[7] For detailed information regarding MADRS see Office of Statistics and Data Management, Bureau of Data Management and Strategy, Health Care Financing Administration, undated staff report.

[8] For a detailed discussion of carrier differences in defining specialties and the relevance of specialty designation to payment, see chapter 6, "Specialty Differentials."

conduct comparisons of approved and prevailing charges within localities.[9] Since 1983 carriers have been required to use the HCFA Common Procedure Coding System (HCPCS), which uses the American Medical Association's Current Procedural Terminology, Fourth Edition (CPT-4) to describe physicians' services (American Medical Association, 1987). For many carriers using alternative coding systems, the transition to HCPCS was problematic, necessitating significant changes in operations and software.

Although CPT-4 does represent a major step toward standardizing procedure coding, there is still a great deal of variability in coding among carriers and physicians. Some is attributable to differences in carriers' or physicians' interpretation of the code--CPT-4 is very complex and, for some services, ambiguous. Other factors that contribute to variability include carrier use of local codes or local modifiers to the basic codes and differences in the definition of global services.[10]

Inaccurate or Incomplete Data. Numerous problems have been identified with the 1985 BMAD data: inconsistencies in the frequencies of services billed, denied, approved, and adjusted; improperly coded services; and inconsistencies in carriers' choice of units for reporting services (for example, time units used for anesthesia services). In addition the 1985 data submitted by several carriers was woefully incomplete. While the accuracy and completeness of the data have improved from early submissions, further progress is needed and is expected as carriers and HCFA gain experience with the new system.

The limited information available regarding the quality of clinical data contained on Part B claims indicates that the data are generally consistent with data contained in the beneficiary's medical record. In a study conducted by Kosecoff, Chassin, et al., (1987), less than 5 percent of a sample of 4,988 claims involving selected surgical procedures were incorrect.[11]

Timeliness of Data. Problems with initial carrier submissions of BMAD data frequently necessitate resubmittal of data at a later date--a time-consuming process. HCFA has recently developed software to be used by carriers to edit

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[9] Data on approved charges are contained in the BMAD procedure file, while prevailing charge data are in the BMAD prevailing charge file. The procedure file designates specialty according to the HCFA specialty codes, in contrast with the prevailing charge file, which uses carrier-specific specialty designations. These differences in specialty coding are one factor that complicates efforts to link approved charge data from the procedure file with prevailing charge data from the prevailing charge file.

[10] For a detailed discussion of issues related to procedure coding see chapter 4, "Procedure Coding for a Fee Schedule."

[11] The procedures sampled included coronary angiography, carotid endarterectomy, and upper gastrointestinal tract endoscopy. Among the claims errors identified: the procedure actually performed was different from the one listed on the claim (2.4 percent); the physician listed on the claim had no record of having treated the patient (1.6 percent); the procedure was not performed in the year indicated on the claim (0.5 percent); the physician listed on the claim never performed the listed procedure (0.3 percent); and the procedure was not performed within the specified geographic area (0.04 percent).

their own BMAD input files before forwarding them to HCFA. Early identification of problems by carriers should reduce the time required to generate corrected files.

Delays also result from backlogs in carriers' processing of claims. At present there is reason to believe that the carrier functions are underfunded. This situation is in part a result of the rapid and underprojected growth in the number of Part B claims.[12]

In accordance with the requirements of the Omnibus Budget Reconciliation Act of 1987, HCFA is also working to establish a process to make summary data on aggregate expenditures by type of service and provider available on a quarterly basis. It is anticipated that this aggregate data will be provided within ninety days after the close of each quarter, beginning with the quarter ending March 31, 1989.

Difficulties in Obtaining Longitudinal Data. The conduct of time series analyses requires data from multiple years. But BMAD files are constructed for individual years, so obtaining longitudinal data requires combining information from multiple files. This process can be complicated if, as is frequently the case, modifications are made in file formats.

BMAD pertains only to the years after 1984.[13] Requests for longitudinal data are likely to increase as additional years of information are accumulated. Such longitudinal data is particularly important in assessing the impact of modifications in the payment mechanisms or changes in the delivery system. Consequently, it may be appropriate to plan for the creation of special data sets or appropriate retrieval capabilities or both to obtain BMAD longitudinal data.

Additional Data Elements. As currently defined, BMAD is inadequate to support certain types of analyses, most notably analyses of particular diagnoses or problems (for example, types of resources and expenditures associated with the out-of-hospital treatment of diabetics) and analyses of individual physicians' or nonphysician providers' practice patterns, such as estimation of average total payments to individual physicians by specialty. BMAD data are also not amenable to answering policy questions concerning geographic regions different from carrier-defined localities or aggregations of localities.

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[12] For a discussion of issues related to carriers, see chapter 12.

[13] In addition to BMAD, the Part B data system also includes a series of annual utilization files known as the Five Percent Sample Bill Summary Record. These files cover 1975 to the present and have been used for time series analyses. BSR data is more limited and less current than the BMAD data.

localities within a state. Some carriers designate different localities to distinguish between rural and urban areas, while others do not. Overall, localities do not constitute the desired geographic unit for analyzing geographic variation in utilization or practice patterns. In the future the use of an alternative geographic designation, such as zip code, may be more appropriate.

Improved Linkages to Other Data Systems. As noted above, HCFA recently established the Medicare Automated Data Retrieval System (MADRS) to provide beneficiary-specific data on the use of Part A and Part B services. MADRS represents an important accomplishment in the linkage of information from two distinct data systems.

MADRS is however a data retrieval system that is created and maintained at the national level to support analyses. It may be necessary to provide for the integration of Part A and Part B data at the carrier level to provide information on a more timely basis for the review of access, quality, and utilization (on an episode of care basis) by PROs, carriers, and intermediaries.[19]

Consideration should also be given to establishing appropriate linkages between Medicare and other data systems, such as those maintained by Medicaid, Blue Cross and Blue Shield, and the major commercial payers. Linkages to these other data systems are necessary to analyze issues such as physician assignment practices for the beneficiaries not eligible for Medicaid.

Efforts to Address Data Limitations

HCFA generally works through either carrier representative groups (CRGs) or technical advisory groups (TAGs) to address problems with the current Part B data system. CRGs, consisting of a limited number of senior staff from carriers who have been elected to represent carrier interests as a whole, generally meet with HCFA senior staff quarterly. TAGs are established on an ad hoc basis to address specific issues and their composition varies depending on the issue.

There is also a Uniform Claim Form Task Force, chaired jointly by HCFA and the American Medical Association, with representation from the Blue Cross and Blue Shield Association, the Health Insurance Association of America, the state Medicaid programs, and others. This task force meets regularly to consider changes to the HCFA 1500 claim form and variants of this form used by other insurers to foster standardization.

In addition to HCFA's processes for resolving problems with the current Part B data system and the efforts of the agency and others to encourage uniformity among claims forms, the National Committee on Vital and Health Statistics of

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[19] HCFA has recently developed a pilot project known as the Combined A/B Working File. The file provides immediate online access at the carrier level to a combined Part A and Part B file of beneficiary entitlement and utilization data. This project has the potential to improve the accuracy, efficiency and timeliness of claims processing, and to enhance the effectiveness of the quality and utilization review functions performed by carriers, intermediaries, and PROs.

Part B claims generally contain only a brief narrative description of the patient's diagnosis or nature of illness.[14] Claims for payments to practitioners or suppliers (HCFA-1500) may or may not contain ICD-9-CM codes for diagnoses listed.[15] Although the unassigned claim forms (HCFA-1490S) require only that the beneficiary describe the illness or injury for which treatment was provided, diagnostic information may be included on the attached itemized provider bill. The accuracy of diagnostic information included on the assigned and unassigned claims is questionable.[16]

The inability to conduct physician-specific analyses results from two aspects of the current data system: the use of carrier-specific physician identification systems (carriers have no single system for identifying providers, such as social security numbers, but rather use a variety of identification systems) and the absence of a requirement to identify the individual physician or other provider who performed the service on all Part B claims (on certain claims the medical group is identified rather than the specific physician). Because physicians and other providers are not assigned a unique number by HCFA for purposes of Medicare billing it is difficult to analyze the services provided by a given physician in alternative practice settings or locations.[17] The identification of the individual provider of services is further complicated when services are provided by a medical group that uses a single identifier.

Another problem with the current data system is the use of localities as the geographic unit for payment purposes.[18] The designation of localities, traditionally left to each carrier, does not reflect any consistent policy. In some cases localities represent entire states; in others there are numerous

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[14] For a discussion of potential applications of Part B diagnostic data in the area of utilization review see chapter 12.

[15] ICD-9-CM refers to the ninth revision of the *International Classification of Diseases, Clinical Modification* (Commission on Professional and Hospital Activities, 1986). It is a coding system for diseases, disorders, and procedures that is used in describing diagnoses and procedures for inpatient episodes. Approximately 30 percent of Part B claims are submitted electronically, and these claims do include the ICD-9-CM codes for the patient's diagnosis (HCFA Carrier Workload and Processing Time Report, August 1987). ICD-9-CM codes are far less ambiguous and more detailed than narrative descriptions of diagnoses. Consequently, coded diagnoses are preferable, assuming that the codes are assigned properly. As the proportion of claims submitted electronically increases, as is expected, the use of coded diagnoses will also increase.

[16] The completion of claims by beneficiaries may also result in a loss of coverage (for instance, for beneficiaries who are unwilling or unable to complete the forms). The impact on beneficiary coverage will be an important issue in assessing the problems associated with the current claims preparation and submission process. It will also be important to identify appropriate methods of ensuring the accuracy of any diagnostic information submitted.

[17] The issue of a unique physician identifier relates to all payers, not just Medicare. The conduct of analyses of physician productivity, practice patterns, and income require data regarding all the services provided by a physician, not just Medicare services.

[18] For a discussion of issues related to the use of localities, see chapter 7.

the National Center for Health Statistics undertook an evaluation of current data system requirements related to physician services reimbursement, planning, and research (National Center for Health Statistics, 1987). Some of the issues discussed in its final report include the need for unique patient and provider identification systems for all payers, the importance of capturing encounter-specific diagnostic or problem information, and the value of having a single procedure coding system for inpatient and ambulatory care.

The evaluation by the National Center for Health Statistics represents a notable first step in identifying Part B data system improvements. Particularly significant is that the scope of the evaluation encompassed all major payers and considered issues related to both fee-for-service and capitated delivery systems. This is an important consideration, because the value of certain enhancements to the Medicare Part B data system is far greater if also adopted by other payers and if applicable to alternative delivery and financing systems.[20] Some degree of uniformity in data collection among payers and types of provider entities would also minimize the burden of reporting on both patients and practitioners/suppliers and reduce the complexity of claims management by carriers and similar organizations.

USERS AND APPLICATIONS OF PART B DATA

To develop an intermediate-range (three- to five-year) plan for data system improvements, specific users or applications of data and their associated data requirements must be identified, and the effects of proposed changes on beneficiaries, providers, and Medicare program operations must be assessed. Current users of Part B data include

- Carriers and PROs. Part B data system requirements determine to some extent the effectiveness of certain carrier and PRO activities, such as utilization review, quality assessment, and detection of fraud and abuse.

- HCFA. Part B data is important for both program administration and evaluation and serves as a resource to such HCFA bureaus and departments as the Office of Research and Demonstrations, the Office of Legislation and Policy, and the Bureau of Eligibility Reimbursement Coverage.

- Congressional agencies. Part B data is used by the Commission in its developmental work involving physician payment mechanisms, and by both the Commission and ProPAC in conducting analyses of payment-related issues. It is also used by the Office of Technology Assessment, the Congressional Research Service, the Congressional Budget Office and the General Accounting Office.

- Other executive branches and federal agencies. The National Center for Health Statistics, and other federal agencies also rely on Part B data to conduct specific analyses.

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[20] For example, if all payers adopt a single system of physician identification, it will be possible to assess physician productivity, resource utilization, and income by specialty. If similar reporting requirements are applicable to both HMOs and the fee-for-service sector, it will be possible to conduct comparative analyses of the quality and cost of care.

Of particular relevance to HCFA, congressional agencies, and the executive branch and other federal agencies are the BMAD files. Carriers and PROs rely heavily on the many source files from which BMAD data are extracted or derived. Any plan for Part B data system improvements must reflect the needs of these various groups of users.

Applications of Part B data generally relate to three major activities: planning and evaluation, quality assurance and utilization review, and program administration. An additional application that may be particularly important in the future is analysis of practice patterns and the continuing education of providers.

Planning and Evaluation

In light of recent and anticipated changes in Medicare payment systems, data necessary for planning and evaluation purposes must be available. Specific applications might include analyses of beneficiaries to assess trends in accessibility and use of services, level of copayments, and impact of balance billing; analyses to identify trends and geographic or specialty variations in practice patterns, service provision, and physician income; diagnosis or procedure-based analyses to assess patterns of care and outcome; simulation or projection of effects of a fee schedule on the use and distribution of services; and analyses of utilization and price data by small geographic areas to develop expenditure targets.

Quality Assurance and Utilization Review

Monitoring the quality and use of Part B services is primarily the responsibility of PROs and carriers. PROs will soon require Part B claims data to select samples of cases or providers for review of ambulatory care. Although reviews currently focus on hospitals and HMOs, it is anticipated that PRO review activities will be expanded to include physicians' services in 1990. The content, integrity, and completeness of the Part B data system also determines to a great extent the effectiveness of carrier efforts to screen claims for inappropriate use of services.

In addition to ongoing review activities, HCFA and others frequently conduct special quality or utilization studies (for example, HCFA recently analyzed and released comparative data on hospital-specific mortality rates). Future improvements in the data system should be considered to allow more sophisticated analyses of patient outcomes or variations in utilization as an integral part of Medicare's quality and utilization review activities.[21]

Program Administration

The Part B data system should be adequate to enable those involved in program administration to operate in an efficient and effective manner under current or

[21] GAO is currently conducting an analysis of alternative approaches to improving Medicare's quality-of-care assessment and assurance mechanisms. This analysis includes an evaluation of the adequacy of the Medicare data currently collected and identification of necessary data system enhancements. GAO's report should be available soon.

anticipated financing mechanisms. Carriers now require data to calculate the appropriate fees, detect fraud and abuse, calculate appropriate deductibles and coinsurance, and establish beneficiary eligibility.

If a fee schedule is implemented, the data requirements of carriers are likely to change. For example, some data currently used to calculate prevailing charges may no longer be needed, while other data not currently available may be required to update the fee schedule.

Analysis of Practice Patterns and Education of Providers

With the intensification of efforts to slow the rate of growth in health care expenditures, critical assessment of medical practice patterns has become increasingly important for identifying opportunities to decrease the use of services while maintaining the quality of care. The Commission is currently considering alternative methods of increasing knowledge regarding the appropriateness of services, translating this knowledge into practice guidelines, and eliciting appropriate changes in physicians' practice patterns through such mechanisms as educational programs.[22]

Information regarding the use of services for specific diagnostic problems and associated patient outcomes will probably be needed to support efforts to improve the appropriateness of patient care.[23] This information could also be used to design physician education programs.

PLANNING PROCESS

During the coming year, the Commission will identify and assign priorities to the current and anticipated data requirements related to Part B Medicare services. This process will necessitate extensive input from HCFA staff who are actively involved in data system development and operations.[24]

The objectives of the planning process are:

- To conduct a comprehensive analysis of the current information requirements associated with each of the major applications--planning and evaluation, monitoring quality and utilization, program administration, medical knowledge and provider education.
- To anticipate information requirements associated with each functional area in three to five years, assuming the implementation of a fee schedule.

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[22] For a detailed discussion of issues related to improving physician practice patterns see chapter 13.

[23] It is unclear whether this type of information should be collected routinely for all beneficiaries receiving services or for only a selected sample of cases.

[24] In preliminary discussions regarding the planning process, HCFA staff have been very supportive of the Commission's efforts to clarify and anticipate Part B data requirements.

- To identify Medicare data system improvements required to satisfy current and anticipated information requirements and methods of streamlining data processes.

- To ascertain the extent to which Medicare's expected data requirements may be coordinated with those of other third-party payers to minimize the burden of compliance for beneficiaries, physicians, and carriers.

- To identify the financial, operational, and other implications of the proposed enhancements for beneficiaries, physicians, carriers, and HCFA.

- To develop an intermediate-range plan for data improvement.

The planning process will focus on the information and data requirements associated with the Medicare Part B program, but will consider Part A and Medicaid data requirements to the extent that information is needed on the full range of services provided to beneficiaries. Planning activities related to Medicare Part A and Medicaid data requirements will be coordinated with the Prospective Payment Assessment Commission and HCFA. The possibility of linking Medicare and Medicaid data for those beneficiaries with dual eligibility will also be explored.

An advisory panel will be established to oversee the planning process. The panel will include representation of users from each of the major areas of application and HCFA's Bureau of Data Management and Strategy. The Commission also will seek advice from physicians and beneficiaries about the types of data required to answer questions of greatest concern to them.

Broad input from users in each of the major areas of application will be obtained through interviews or surveys or both. This input will be used to identify information requirements.

Efforts will be made to coordinate Medicare's data requirements with those of other payers. Discussions will be held with representatives of the state Medicaid programs, Blue Cross and Blue Shield, and the major commercial payers, most of whom are members of the Health Insurance Association of America, to identify issues of mutual concern and to explore the possibility of coordinating data requirements.

Assistance from HCFA will be sought to identify the impact of the proposed changes on beneficiaries, practitioners, suppliers, carriers, and HCFA regional and central offices, and the extent to which possible changes in data requirements might burden physicians and beneficiaries. This process will include an evaluation of the financial and operational implications associated with alternative methods of implementing proposed changes. Efforts will also be made to identify the necessary safeguards to insure appropriate levels of beneficiary and provider confidentiality.

Although most proposed improvements will probably involve modifications to the current Part B data system, in some instances it may be appropriate to consider establishing an alternative method of data collection. The Part B data system

is organized around the claims processing function. For purposes of collecting certain data, such as patient outcome indicators and productivity data for capitated and noncapitated health sectors, it may be appropriate to collect sample data on a periodic basis.

The planning process will culminate with the development of an intermediate-range plan for data system improvements. This plan will include a description of the benefits associated with each proposed modification and the necessary actions required for implementation. Priorities will be associated with the proposed modifications, and a recommended time schedule will be developed for implementation.

APPENDIX

CONSOLIDATED OMNIBUS BUDGET RECONCILIATION ACT OF 1985 (P.L. 99-272)

SEC. 9305. PHYSICIAN PAYMENT REVIEW COMMISSION AND DEVELOPMENT OF RELATIVE VALUE SCALE.

(a) ESTABLISHMENT OF COMMISSION - Part B of Title XVIII of the Social Security Act is amended by adding at the end the following new section:

"PHYSICIAN PAYMENT REVIEW COMMISSION

"SEC. 1845 (a)(1) The Director of the Congressional Office of Technology Assessment (hereinafter in this section referred to as the 'Director' and the 'Office', respectively) shall provide for the appointment of a Physician Payment Review Commission (hereinafter in this section referred to as the 'Commission'), to be composed of individuals with expertise in the provision and financing of physicians' services appointed by the Director (without regard to the provisions of Title 5, Unites States Code, governing appointments in the competitive service).

"(2) The Commission shall consist of 11 individuals. Members of the Commission shall first be appointed no later than May 1, 1986, for a term of three years, except that the Director may provide initially for such shorter terms as will insure that (on a continuing basis) the terms of no more than four members expire in any one year.[1]

"(3) The membership of the Commission shall include physicians, other health professionals, individuals skilled in the conduct or interpretation of biomedical, health services, and health economics research, and representatives of consumers and the elderly. The Director shall seek nominations from a wide range of groups, including:

"(A) national organizations representing physicians, including medical specialty organizations,

"(B) organizations representing the elderly and consumers,

"(C) national organizations representing medical schools,

"(D) national organizations representing hospitals, including teaching hospitals, and

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[1] Under the Omnibus Budget Reconciliation Act of 1986 (P.L. 99-509), two additional members were appointed to the Commission, increasing the number of Commission members from 11 to 13. No more than five members' terms may expire in any one year.

"(E) national organizations representing health benefits programs.[2]

"(b)(1) The Commission shall make recommendations to the Congress, not later than March 1 (beginning with 1987)[3], regarding adjustments to the reasonable charge levels for physicians' services recognized under Section 1842(b) and changes in the methodology for determining the rates of payment, and for making payment, for physicians' services under this title and other items and services under this part.

"(2) In making its recommendations, the Commission shall:

"(A) consider, and make recommendations on the feasibility and desirability of reducing the differences in payment amounts for physicians' services under this part which are based on differences in geographic location or specialty;

"(B) review the input costs (including time, professional skills, and risks) associated with the provision of different physicians' services;

"(C) identify those charges recognized as reasonable under section 1842(b), which are significantly out-of-line, based on the considerations of subparagraphs (A) and (B);

"(D) assess the likely impact of different adjustments in payment rates, particularly their impact on physician participation in the participation program established under section 1842(h) and on beneficiary access to necessary physicians' services;

"(E) make recommendations on ways to increase physician participation in that participation program and the acceptance of payment under this part on an assignment-related basis;

"(F) make recommendations respecting the advisability and feasibility of making changes in the payment system for physicians' services under this part based on (i) the Secretary's study under section 603(b)(2) of the Social Security Amendments of 1983 (relating to payments for physicians' services furnished to hospital inpatients on the basis of diagnosis-related groups) and (ii) the Office's report under section 2309 of the Deficit Reduction Act of 1984 (relating to physician reimbursement under this part);

"(G) identify those procedures, involving the use of assistants at surgery, for which payment for those assistants should not be made under this title without prior approval; and

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[2] Under The Omnibus Budget Reconciliation Act of 1987 (P.L. 100-203), the process of appointing members to the Commission was revised. The provision repealed the requirement that the Director of OTA seek nominations. It also required that the Commission be composed of a mix of professionals nationally recognized for their expertise in health economics, physician reimbursement, medical practice and other related fields. They should represent different geographic areas of the country and a balance between urban and rural areas.

[3]The date of the Commission's annual report to Congress was changed to March 31 of each year in the Omnibus Budget Reconciliation Act of 1987 (P.L. 100-203).

"(H) identify those procedures for which an opinion of a second physician should be required before payment is made under this title.

"(3) The Commission also shall advise and make recommendations to the Secretary respecting the development of the relative value scale under subsection (e).[4]

"(c)(1) The following provisions of section 1886(e)(6) shall apply to the Commission in the same manner as they apply to the Prospective Payment Assessment Commission:

"(A) Subparagraph (C) (relating to staffing and administration generally).

"(B) Subparagraph (D) (relating to compensation of members).

"(C) Subparagraph (F) (relating to access to information).

"(D) Subparagraph (G) (relating to reports and use of funds).

"(E) Subparagraph (H) (relating to periodic GAO audits).

"(F) Subparagraph (J) (relating to requests for appropriations).

"(2) In order to carry out its functions, the Commission shall collect and assess information on medical and surgical procedures and services, including information on regional variations of medical practice. In collecting and assessing information, the Commission shall:

"(A) utilize existing information, both published and unpublished, where possible, collected and assessed either by its own staff or under other arrangements made in accordance with this section.

"(B) carry out, or award grants or contracts for original research and experimentation, where existing information is inadequate for the development of useful and valid guidelines by the Commission, and

"(C) adopt procedures allowing any interested party to submit information with respect to physicians' services (including new practices, such as the use of new technologies and treatment modalities), which information the Commission shall consider in making reports and recommendations to the Secretary and Congress.

"(d) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section. Such sums shall be payable from the Federal Supplementary Medical Insurance Trust Fund."

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[4] The Commission is also required to comment on all regulations proposed by the Secretary to implement inherent reasonableness changes in physician payment levels, as authorized under Section 4526. To date the Secretary has issued no proposed regulations.

Reasonable Charge Limits Inherent Reasonableness

Section 4526 - Under the inherent reasonableness authority, the Secretary would be authorized to establish a payment level for a physician service based on considerations other than the actual, customary, or prevailing charge for the service. A departure from the standard methodology would be appropriate under a number of circumstances, including the following: (i) the prevailing charge for a service in a particular locality is significantly in excess of, or below, the prevailing charge for the same service in other comparable localities taking into account the relative costs of furnishing the service; (ii) medicare and medicaid are the sole or primary sources of payment for the service; (iii) the marketplace for the service is not truly competitive; (iv) there have been increases in charges for a service that cannot be explained by inflation or technology; (v) the charges do not reflect changing technology, increased facility with that technology, or reductions in acquisition or production costs; (vi) the prevailing charge for a service under this part are substantially higher or lower than the payments made for the service by other purchasers in the same locality.

The Secretary would be authorized to make an adjustment in payment if such adjustment is justified on the basis of an appropriate comparison of resource costs or charges. An adjustment may be based on one of the following types of comparisons: (i) a comparison between charges and resource costs for the procedures; (ii) a comparison between charges and resource costs for the procedure over a period of time; (iii) a comparision between charges for a procedure in different geographic areas; and (iv) a comparison between charges and allowed payments for a procedure under this part and by other payers. The term "resource costs" includes such factors as the time required to provide a procedure (including pre-procedure evaluation and post-procedure follow-up), the complexity of the procedure, the training required to perform the procedure, and the risk involved in the procedure.

Adjustments based on comparisons of charges for a procedure in different geographic areas may be made only if the Secretary determines that the prevailing charge allowed in a locality is out of line with prevailing charges allowed in other localities after accounting for differences in practice costs. The Secretary would not be authorized to establish a uniform fee or payment limit under this provision unless the Secretary determines that there is substantial economic justification for a uniform fee or a uniform payment limit. Such justification would have to be explained in a proposed and final notice.

In determining whether to adjust payment rates, the Secretary would be required to consider the potential impacts on quality, access, and beneficiary liability of the adjustment, including the likely effects on assignment rates, reasonable charge reductions on unassigned claims, and participation rates of physicians.

The Secretary would be required to consult with representatives of physicians likely to be affected at an appropriate stage in the process. The Secretary would also be required to publsih a proposed notice: (i) specifying the charge or methodology proposed to be established, (ii) explaining the factors and data

on which the proposal is based, and (iii) explaining the potential impacts on quality, access, and beneficiary liability. After publication of the proposed notice, the Secretary would be required to allow 60 days for public comment. The Physician Payment Review Commission would be required to comment on the proposal, and the Secretary would be required to take into account the comments made by the Commission and by the public in making a final determination. The final notice shall explain the factors and data that the Secretary took into consideration in making a final determination and must include and respond to the comments made by the Commission.

If an adjustment is made that results in a reduction in the payments allowed for a service, a special limit on actual charges for nonparticipating physicians would apply. The purpose of this special limit is to moderate beneficiary liability for charges in excess of the medicare approved charge. For the first year the reduction is in effect, the maximum allowable actual charge for the service equals 125 percent of the inherently reasonable charge level plus one-half of the difference between the physician's actual charge in the preceding period and 125 percent of the inherently reasonable charge level.

The Secretary is required to review payments under this section for 10 of the most costly procedures paid for under Part B. The Secretary should have flexibility in choosing the procedures in terms of those for which modifications might be the most cost effective. If the Secretary determines that for one or more of such overpriced procedures that a payment adjustment cannot be made pursuant to this section, he shall report recommendations to Congress concerning appropriate statutory changes.

Technical Amendments and Miscellaneous Provisions Relating to Part B

Section 10234 - Expands the membership of the Physician Payment Review Commission by two (2) members to 13. The Director of the Congressional Office of Technology Assessment shall appoint the two additional members of the Commission no later than 60 days after the date of the enactment of this Act, for terms of three (3) years, except that the Director may provide initially for such terms as will ensure that (on a continuing basis) the terms of no more than five members expire in any one (1) year.

OMNIBUS BUDGET RECONCILIATION ACT OF 1987 (P.L. 100-203)

Revision of Appointment Process for the Physician Payment Review Commission. Provides that the Commission shall be composed of a mix of professionals with national recognition for their expertise in health economics, physician reimbursement, medical practice and other related fields. Requires that the members represent different geographic areas of the country and that there is a balance between urban and rural areas. Repeals the requirement that the Director of OTA seek nominations.

Treatment of Employees of Physician Payment Review Commission as Congressional Employees. Provides that for purposes of pay (other than pay for members of the Commission) and employment benefits, rights, and privileges, all personnel of the Commission shall be treated as if they were employees of the United States Senate.

Change in Reporting Date for Physician Payment Review Commission. Changes the reporting date to March 31 of each year.

BIOGRAPHIES

COMMISSION MEMBERS

PHILIP R. LEE

Philip R. Lee, M.D., Professor of Social Medicine, has served as Director of the Institute for Health Policy Studies at the University of California, San Francisco (UCSF) since 1972. He served as Chancellor of UCSF from 1969 to 1972 and was Assistant Secretary for Health and Scientific Affairs in the Department of Health, Education, and Welfare from 1965 to 1969. Dr. Lee is the author of over 100 articles in the health field, and he has coauthored numerous books. His teaching and research endeavors in the field of health policy focus on health care for the elderly, prescription drugs, physician payment, reproductive health policy, and AIDS-related policies and costs. Dr. Lee is a frequent advisor to Federal health policy makers, and he serves on numerous boards and planning groups. He currently serves as President of the Health Commission for the City and County of San Francisco, and in July 1986 he was appointed Chairman of the Physician Payment Review Commission.

OLIVER BEAHRS

Oliver H. Beahrs, M.D., earned an international reputation as a surgeon during a 29-year career at the Mayo Clinic, Rochester, Minnesota. His main areas of surgical interest included surgery of the head and neck and the gastrointestinal tract. An Alabama native, he received his M.D. degree from Northwestern University in 1941. After four years in the U.S. Navy, he did his training in surgery at the Mayo Graduate School, then joined the Mayo staff in 1950. He retired in 1979 and currently holds the position of emeritus professor of surgery, Mayo Medical School. Dr. Beahrs has contributed significantly to surgical literature with over 300 published works. He has held many leadership positions during and after his career at Mayo, including: vice chairman of the Board of Governors of the Mayo Clinic, president of the American Surgical Association, president of the Society of Head and Neck Surgeons, chairman of the Board of Governors of the American College of Surgeons, and chairman of the Board Regents of the American College of Surgeons. He is currently president-elect of the College.

JIM BOB BRAME

Jim Bob Brame, M.D., is a family physician practicing in Eldorado, Texas. Dr. Brame has been in private practice in rural West Texas since 1964. He is a graduate of the Tulane University School of Medicine. Dr. Brame's career-long interest has been in improving the quality of health care available in rural areas. He has assisted in the design and implementation of a prototype rural health facility in West Texas and helped establish rural health clinics in Guatemala. He also has served as a physician representative to the American Hospital Association's Governing Council on Small or Rural Hospitals. Dr. Brame is a member of the National Rural Health Association. Dr. Brame was President of the Texas Medical Association (TMA) last year. He has served on several TMA committees, including the Committee on Health Care of the Poor, the Committee on Health Planning, and the Council on Health Facilities. Dr.

Brame is a member of the Texas Academy of Family Physicians, and has served on their Board of Directors. As a member of the American Academy of Family Physicians, he has served on their Commission on Health Care Services.

ROBERT N. BUTLER

Robert N. Butler, M.D., has been Brookdale Professor and Chairman of the Gerald and May Ellen Ritter Department of Geriatrics and Adult Development at Mount Sinai Medical Center since 1982. He is a graduate of the Columbia University College of Physicians and Surgeons. Dr. Butler came to Mount Sinai from the National Institutes of Health, where he served as the first director of the National Institute on Aging. Some of the achievements resulting from his efforts to improve the quality of life for people over 65 include the development of geriatrics research and education, establishment of research programs for the study of Alzheimer's disease, and creation of the teaching nursing home concept and grant program. Dr. Butler won the Pulitzer Prize in 1976 for his book, Why Survive? Being Old in America. He is editor-in-chief of Geriatrics, a journal for primary care physicians, and serves on the editorial board of several other professional publications. Dr. Butler is also Editor of the Long Life Series, Ballantine Books, and often consults for television and radio. Dr. Butler is a member of the Institute of Medicine of the National Academy of Sciences, and a founding Fellow of the American Geriatrics Society. He has served as consultant to the United States Senate Special Committee on Aging, the National Institute of Mental Health, the Commonwealth Fund, the Brookdale Foundation, and numerous other organizations.

KAREN DAVIS

Karen Davis, Ph.D., is Chairman of the Department of Health Policy and Management in the School of Hygiene and Public Health and has a Joint Appointment as Professor of Economics, Johns Hopkins University. Positions previously held by Dr. Davis include Deputy Assistant Secretary for Planning and Evaluation/Health at the U.S. Department of Health and Human Services; Administrator of the Public Health Service, Health Resources Administration; Senior Fellow at the Brookings Institution, and Visiting Lecturer at Harvard University. Dr. Davis is Director of The Commonwealth Fund Commission on Elderly People Living Alone. She also serves as Regional Editor USA/Canada for the journal Health Policy. In addition, she is a member of the Institute of Medicine, National Academy of Sciences, serves as a consultant for the World Health Organization, European Regional Office, and sits on several other boards and committees concerned with health policy issues. Dr. Davis is the author of numerous books and articles on health economics and policy analysis including Medicare Policy: New Directions for Health and Long-Term Care; Health and the War on Poverty: A Ten Year Appraisal; National Health Insurance: Benefits, Costs and Consequences. She holds her Ph.D. from Rice University in economics.

JOHN M. EISENBERG

John M. Eisenberg, M.D., M.B.A., is Sol Katz Professor of General Internal Medicine and Chief of the Section of General Internal Medicine at the University of Pennsylvania. He is a graduate of Washington University School of Medicine, St. Louis. After his residency in internal medicine at the Hospital of the University of Pennsylvania, Dr. Eisenberg was a Robert Wood Johnson Foundation Clinical Scholar and earned a Master of Business Administration degree at the Wharton School. He is now a Senior Fellow of the University of Pennsylvania's Leonard Davis Institute of Health Economics. Dr. Eisenberg is a member of the Board of Governors of the American Board of Internal Medicine

and a member of the Council of the Association of Program Directors in Internal Medicine. He has served as president of the Society for Research and Education in Primary Care Internal Medicine and as vice president of the Society for Medical Decision Making. He has served as chairman of the Council of Medical Societies of the American College of Physicians and was a member of its Board of Regents. He is chairman of the College's Health Care Financing Subcommittee and a member of its Health and Public Policy Committee. Previously, he was a member of the Health Care Technology Study Section of the National Center for Health Services Research. Dr. Eisenberg has served as a consultant to and member of the editorial boards of several major medical and health policy journals. He is the author of Doctors' Decisions and the Cost of Medical Care, and has published over 80 articles and chapters on topics such as physician practice, test use and efficacy, medical education and clinical economics.

JACK GUILDROY

Jack Guildroy is a member of the National Legislative Council of the American Association of Retired Persons (AARP). Previously he served as chairman of the Association's New York State Legislative Committee. An educator for 37 years until his retirement in 1978, Mr. Guildroy taught mathematics and social studies in secondary schools in New York and Massachusetts. Most of his career was devoted to counseling students at the high school level. A co-founder of the New York State Counselors Association, he was also active in work with the College Board and its Committee on Guidance. He authored articles on the ethical-legal problems of counselors in the College Board Review. Mr. Guildroy helped establish the Retired Educators Chapter of the Great Neck Teachers Association and was secretary of the North Nassau Retired Teachers Association. He is a board member of the Friends and Relatives of Institutionalized Aged, Inc., and editor of its bulletin. Mr. Guildroy is a graduate of the University of Rochester with a bachelor's degree in mathematics and a master's in history. In addition, he has a permanent certificate in counseling from Columbia University Teachers College, and has taken graduate studies at New York University and the New School for Social Research.

MARK C. HORNBROOK

Mark C. Hornbrook, Ph.D. is a Senior Investigator at the Kaiser Permanente Center for Health Research in Portland, Oregon. Dr. Hornbrook also holds part-time academic appointments in the Schools of Nursing and Medicine at the Oregon Health Sciences University. Previously, as a Senior Research Manager in the Division of Intramural Research, National Center for Health Services Research, he was responsible for directing research on hospital case mix, costs, and use. A recognized expert in health care reimbursement systems, case-mix measurement, and cost-benefit and cost-effectiveness analysis, Dr. Hornbrook is currently directing several important studies including analysis of alternative risk-adjustment methods for reimbursing HMOs for Medicare beneficiaries, and methods of prospective payment for physician services and long-term care. In addition, Dr. Hornbrook is directing two major studies of the cost-effectiveness and cost-benefit of innovative health care programs. Dr. Hornbrook serves as a consultant to several Federal agencies including the Office of Technology Assessment, National Center for Health Services Research and Health Care Technology Assessment, Veterans Administration, National Institutes of Health and Health Care Financing Administration. Dr. Hornbrook holds his Ph.D. in medical care organization, with emphasis in health economics from the University of Michigan.

CAROL ANN LOCKHART

Carol Ann Lockhart, Ph.D., F.A.A.N., is Executive Director of the Greater Phoenix Affordable Health Care Foundation, an organization comprised of consumers, providers and payers who work together to promote accessible, affordable, quality health care. Dr. Lockhart has held a number of positions in public health both at the local and state level. Most recently she directed policy and program development for health and day care institutions in the Arizona Department of Health Services. She also served as Acting Director of the Arizona Health Care Cost Containment System (AHCCCS) during the initial months of the program. Dr. Lockhart served on the faculties of the Arizona State University College of Business Administration and the College of Nursing, as well as teaching in other public health and nursing programs. She has coauthored two books on labor relations in health care. Dr. Lockhart is a Fellow of the American Academy of Nursing, and recently received her Ph.D. from the Florence Heller Graduate School for Social Policy, Brandeis University.

WALTER J. MCNERNEY

Walter J. McNerney is the Herman Smith Professor of Hospital and Health Services Management at the J. L. Kellogg Graduate School of Management, Northwestern University and the managing partner of Walter J. McNerney and Associates, a management consulting firm in the health field. From 1961 to 1978, Mr. McNerney served as the President of the Blue Cross Association and from 1978 through 1981 served as President of the Blue Cross and Blue Shield Association. Prior to 1961, Mr. McNerney was in hospital and medical center administration and served on the faculties of the Graduate School of Public Health and Graduate School of Management, University of Michigan. Given his experience and broad understanding of health care policy issues, Mr. McNerney has been asked to sit on many important boards and committees, such as Chairman, Robert Wood Johnson Foundation Fellowship Program on Health Financing; Chairman, Board of Health Care Services, Institute of Medicine, and Advisory Panel on Assessment of Medical Technology, Office of Technology Assessment. Mr. McNerney has published several books, monographs, chapters and articles. He received his master's in hospital administration from the University of Minnesota.

THOMAS R. REARDON

Thomas R. Reardon, M.D., has maintained a busy general practice in Portland, Oregon for nearly 25 years. He is a graduate of the University of Colorado Medical School. Dr. Reardon has been involved in activities on behalf of organized medicine at the county, state and national level. He now represents the AMA Hospital Medical Staff Section at the AMA House of Delegates. In addition, Dr. Reardon has served on the AMA Task Force on Physician Manpower. Prior to his tenure as President of the Multnomah County Medical Society in 1980 to 1981, Dr. Reardon served on several important committees including peer review and grievance. He later held the offices of vice president and president of the Oregon Medical Association (OMA). Dr. Reardon served as chairman of several important committees of the OMA, including the Committees on Private Practice and Hospital Relations, Health Planning, Legislation, Board of Censors and Ethics. In addition to his involvement with organized medicine, Dr. Reardon has assisted his community by serving on various task forces to study health care for the medically indigent. He has maintained an active liaison with the elderly community and participated on Congressman Ron Wyden's task force on Medicare reimbursement.

UWE R. REINHARDT

Uwe R. Reinhardt, Ph.D., is the James Madison Professor in Political Economics at Princeton University where he has been teaching since 1968. He received his Ph.D. in economics from Yale University. Professor Reinhardt is a member of the Washington-based National Leadership Commission on Health. He has served on several councils and task forces, such as the Governing Council of the Institute of Medicine, the National Health Care Technology Council of the Department of Health, Education and Welfare, and the Veterans Administration's Special Medical Advisory Group. He has also served on a number of editorial boards of major health policy and economic journals. Professor Reinhardt is the author of Physician Productivity and the Demand for Health Manpower, and numerous articles on health economics, accounting and corporation finance. Among his work in the latter area have been a financial analysis of the Lockheed L-1011 Tri Star, work on a benefit-cost analysis of the Space Shuttle and on pricing strategies for the Space Shuttle. Dr. Reinhardt's consulting activities have included work for the Department of Health and Human Services, Mathematica Policy Research, the Urban Institute, and Econ Incorporated. He has been a consultant in management training, primarily in managerial economics and corporation finance, for several major corporations.

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Richard W. Wright is Group Insurance Manager, Caterpillar Inc., of Peoria, Illinois. He administers the Group Insurance programs for the U.S. and Canadian operations, including negotiations of contracts with unions, providers, HMOs and insurance carriers. In his current position, Mr. Wright has been instrumental in developing and implementing several major cost containment activities including a joint venture with Boston University's Health Policy Institute, an improved management information system, a high cost case management program, a generic drug substitution program, third party committees with medical societies and concurrent hospital utilization review. Mr. Wright served as vice-chairman of the Illinois State Employee's Group Insurance Advisory Commission for several years. He was also a Pew Fellow in the Center on Industry and Health Care program at Boston University.

COMMISSION STAFF

PAUL B. GINSBURG, Ph.D., is the Executive Director of the Commission. He has had long and varied experience with a wide range of health care financing issues, including physician payment, hospital payment, health insurance, and alternative delivery systems. Prior to the creation of the Commission, Dr. Ginsburg was a Senior Economist at The RAND Corporation, where he led projects on preferred provider organizations, Medicare prospective payment of hospitals, physician payment, and cost containment in employment-based health plans. He was Deputy Assistant Director for Income Security and Health at the Congressional Budget Office, where he prepared analyses for the Congress on federal health policy issues with significant budgetary implications. Dr. Ginsburg has served as an associate professor at Duke University and as an assistant professor at Michigan State University. He earned a doctorate in economics at Harvard University in 1971.

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SHERAN ESTES MCMANUS serves as the Administrative Officer of the Commission. Having received a B.A. from the University of Maryland, she continued her studies at the George Washington University. She previously worked as Executive Associate of the George Washington University's National Health Policy Forum and in various capacities under the Department of Health and Human Services. At the Commission, she is responsible for the administrative and financial aspects of its operation.

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GLOSSARY

ACRONYMS

AAPCC	Average Adjusted Per Capita Cost
ABMS	American Board of Medical Specialties
ARF	Area Resource File, Bureau of Health Professionals, Health Resources and Services Administration, Public Health Service
ASPE	Assistant Secretary for Planning and Evaluation, DHHS
AVG	Ambulatory Visit Group
BERC	Bureau of Eligibility, Reimbursement and Coverage, HCFA
BMAD	Part B Medicare Annual Data
BPO	Bureau of Program Operations, HCFA
BQC	Bureau of Quality Control, HCFA
CMP	Competitive Medical Plan
CPR	Customary, Prevailing, and Reasonable
CPT	Current Procedural Terminology
DRG	Diagnosis Related Group
FFS	Fee-for-Service
FI	Fiscal Intermediary
HCFA	Health Care Financing Administration
HCPCS	HCFA Common Procedure Coding System
HHS	Department of Health and Human Services (also referred to as DHHS)
HMO	Health Maintenance Organization
HMSA	Health Manpower Shortage Area
ICD-9	International Classification of Diseases--Ninth Edition
IPA	Independent Practice Association
LCL	Lowest Charge Level Limit
MAAC	Maximum Allowable Actual Charge
MEI	Medicare Economic Index
MSA	Metropolitan Statistical Area

OIG	Office of the Inspector General
OPHC	Office of Prepaid Health Care, HCFA
PAR	Participating Physician Program
PhysPRC	Physician Payment Review Commission
PPO	Preferred Provider Organization
PPRC	Physician Payment Review Commission
PPS	Prospective Payment System
ProPAC	Prospective Payment Assessment Commission
PROs	Peer Review Organizations
RAPs	Radiologists, Anesthesiologists, and Pathologists
RBRVS	Resource-based Relative Value Scale
RVS	Relative Value Scale
SMI	Supplementary Medical Insurance Program
SMSA	Standard Metropolitan Statistical Area
UCR	Usual, Customary, and Reasonable
UR	Utilization Review

LEGISLATION

COBRA	Consolidated Omnibus Budget Reconciliation Act of 1985, P.L. 99-272, enacted April 7, 1986
DEFRA	Deficit Reduction Act of 1984, P.L. 98-369, enacted July 18, 1984.
OBRA86	Omnibus Budget Reconciliation Act of 1986, P.L. 99-509, enacted October 21, 1986.
OBRA87	Omnibus Budget Reconciliation Act of 1987, P.L. 100-203, enacted December 21, 1987
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982, P.L. 97-248, enacted September 3, 1982.

SURVEYS, STUDIES, AND RESEARCH ORGANIZATIONS

CHER	Center for Health Economics Research
HER	Health Economics Research, Inc.
HIS	Health Interview Survey
HSUS	Health Services Utilization Study (Rand)

NCHS	National Center for Health Statistics
NHDS	National Hospital Discharge Survey
NORC	National Opinion Research Center
PPCIS	Physicians Practice Cost and Income Survey

TERMS

Access: The ability to obtain needed medical care.

Actual Charge: One of the factors determining a physician's payment for a service under Medicare; equivalent to the billed or submitted charge. See Customary, Prevailing, and Reasonable.

Adjusted Average Per Capita Cost (AAPCC): An estimate of the average per capita cost incurred by Medicare per beneficiary in the fee-for-service system, adjusted by county for age, sex, and program entitlement.

Allowed Charge: See Approved Charge.

Approved Charge (allowed charge, reasonable charge): Payment for a physician service under CPR, includes the payment from Medicare and the beneficiary's coinsurance, but not any balance bill. See Balance Bill, Coinsurance, Customary, Prevailing, and Reasonable.

Assignment (Medicare): Decision in advance of billing to accept Medicare's allowed charge as payment in full; a guarantee not to balance bill. Physicians accepting assignment bill Medicare directly. See Balance Billing/Extra Billing, Non-Participating Physician, Participating Physician Program.

Assistant at Surgery: An individual who has the necessary qualifications to participate in a particular operation and actively assists in performing the surgery.

Balance Billing/Extra Billing: A physician's practice of holding a Medicare patient liable for any fee in excess of the Medicare approved charge. See Approved Charge.

Beneficiary: A person eligible for benefits under an insurance plan. Under Part B of Medicare, Americans over 65, many disabled individuals, and certain individuals with end-stage renal disease can become beneficiaries by paying a monthly premium.

Capitation: Refers to a contractual agreement between the federal government and an organized health plan such as an HMO or CMP, whereby Medicare pays the plan a fixed prepaid amount per enrolled beneficiary. In return, the plan is responsible for providing all appropriate entitled health services for some specified period of time. See Competitive Maintenance Plan, Health Maintenance Organization.

Carrier (Medicare): A private contractor who administers claims for Part B services. See Part B (Medicare).

Charge Reduction: The percentage difference between a physician's billed charge and the Medicare allowed charge.

Claims Incurred: Claims related to health care services provided during a given period. Some are received and paid during a later period. Compare Claims Paid.

Claims Paid: Claims actually paid during a given period. Some are incurred in an earlier period. Compare Claims Incurred.

Coding: A mechanism for identifying and defining physician services.

Coinsurance: The portion of the balance of covered medical expenses which a beneficiary must pay after payment of the deductible. Under Medicare Part B, the beneficiary pays coinsurance of 20% of allowed charges. See Deductible.

Competitive Medical Plan (CMP): A health plan that is eligible under TEFRA 1982 to enter into a Medicare risk contract in return for a capitation payment, but which does not satisfy the requirements to be a federally qualified HMO. See Capitation, Federally Qualified HMO.

Copayment: The amount of covered medical expenses which a beneficiary must pay; includes the deductible and coinsurance, but not the balance bill. See Coinsurance, Deductible.

Cost-of-Practice Index (Medicare): A measurement of the differences across geographic areas in the prices of inputs used in medical practices.

Cost-sharing: The portion of payment for health expenses that the beneficiary must pay, including the deductibles, copayments, coinsurance, and extra bill. See Deductible, Copayment, Coinsurance, and Balance Billing.

Current Procedural Terminology (CPT): Coding system for physician services developed by the American Medical Association; basis of the HCPCS coding system. See Coding, HCFA Common Procedures Coding System (HCPCS).

Customary Charge: One of the factors determining a physician's payment for a service under Medicare. Calculated as the physician's median charge for that service over a prior 12 month period. See Customary, Prevailing, and Reasonable.

Customary, Prevailing, and Reasonable (CPR): Current method of paying physicians under Medicare. Payment for a service limited to the lowest of 1) the physician's billed charge for the service, 2) the physician's customary charge for the service, or 3) the prevailing charge for that service in the community. Similar to the Usual, Customary, and Reasonable system used by private insurers. See Customary Charge, Prevailing Charge.

Deductible: A specified amount of covered medical expenses which a beneficiary must pay before receiving benefits. Medicare Part B has an annual deductible of $75.

Diagnosis-Related Groups (DRGs): System of classifying medical cases for payment on the basis of diagnoses, used under Medicare's prospective payment system (PPS) for inpatient hospital services.

Expenditure Targets: A system that adjusts fee updates (or fees themselves) based on how actual expenditures in an area compare to a target for those expenditures.

Extra Billing: See Balance Billing.

Federally Qualified HMO: An HMO that has satisfied certain federal qualifications pertaining to organizational structure, provider contracts, health service delivery information, utilization review/quality assurance, grievance procedures, financial status, and marketing information.

Fee for Service: Refers to paying physicians for individual medical services rendered, as opposed to paying them with salaries or under capitation. CPR and fee schedules are examples of fee-for-service.

Fee Schedule: A catalog of predetermined payments for units of medical service.

Fiscal Intermediary (FI): A private contractor who administers claims for Part A services (e.g., hospital, nursing home) and some Part B services (e.g., hospital outpatient departments).

Global Service: Package of clinically related services treated as a unit for purposes of billing, coding, or payment.

Group Model HMO: An HMO that contracts with a medical group to provide services to members in return for a monthly capitation fee from the HMO. The medical group compensates physicians according to some preestablished procedure. See Health Maintenance Organization (HMO).

Harvard Relative Value Study: A study to develop a resource-based relative value scale, directed by Dr. William Hsiao at Harvard University. The study asked physicians to rate services in terms of specified components of physician's effort (time, mental effort, physical effort, risk, and technical skill) and a composite called "total work". See Resource Based Relative Value Scale (RBRVS).

HCFA Common Procedure Coding System (HCPCS): Coding system based on CPT, but supplemented with additional codes for nonphysician services; required for coding by Medicare carriers. See Coding, Current Procedural Terminology (CPT).

Health Maintenance Organization (HMO): An organization that provides comprehensive health services to its members in return for a fixed prepaid fee. There are four types of HMOs: group, staff, independent practice association, and network.

Independent Practice Association (IPA) Model HMO: An HMO which contracts directly with physicians who continue to practice in their private offices and are paid on a fee-for-service basis. See Health Maintenance Organization (HMO).

Locality (Medicare): A geographic area for which a carrier calculates prevailing charges. Can be a state, or aggregations of counties, parts of counties, metropolitan areas, zip code areas, or townships.

Maximum Allowable Actual Charge (MAAC): A limitation on billed charges for Medicare services provided by non-participating physicians. See Actual Charge, Non-Participating Physician.

Medicaid: A State/Federal Program of health insurance for the poor and medically indigent. States share in financing the program and determine eligibility and benefits consistent with federal standards.

Medical Review (MR): A label often used for utilization review of physician services and claims by a carrier.

Medicare Economic Index (MEI): A limitation on prevailing charges for Medicare services. See Prevailing Charge.

Medigap Insurance: Private health policies providing benefits not covered by Medicare, such as deductibles and coinsurance.

Multiplier: A component used to adjust relative weights in a fee schedule to allow for variation in payment for the same service. For example, a geographic multiplier would allow for variation in payment across locations.

Network Model HMO: An HMO which contracts with two or more medical groups to provide services to members in return for a monthly capitation fee from the HMO. Each medical group compensates its member physicians according to some preestablished procedure.

Nonparticipating Physician: A physician who does not sign a participation agreement, and therefore is not obligated to accept assignment on all claims. See Participating Physician, Participating Physician and Supplier Program.

Outcome: The consequence of a medical intervention on a group of patients.

Overvalued Procedure: Procedure meeting the criteria that its value under Medicare be consistently higher than its value under certain relative value scales, and substantially higher than its value under most of those scales. Also referred to as overpriced procedure.

Part A (Medicare): The Hospital Insurance program, which covers the cost of hospital and related post-hospital services. As an entitlement program, available without payment of a premium. Beneficiaries are responsible for an initial deductible per sepll of illness, and copayment for some services.

Part B (Medicare): The Supplementary Medical Insurance program (SMI), covers the costs of physician services, outpatient laboratory and X-ray tests, durable medical equipment, outpatient hospital care, and certain other services. As a voluntary program, Part B requires payment of a monthly premium. Beneficiaries are responsible for a deductible and coinsurance payment for most covered services. See Beneficiary.

Participating Physician: A physician who signs a participation agreement, agreeing to accept assignment on all Medicare claims for one year.

Participating Physician and Supplier Program (PAR): A program which provides financial and administrative incentives for physicians and suppliers to accept assignment on all Medicare claims.

Peer Review Organization (PRO): Organization that reviews the medical necessity and the quality of care provided to Medicare beneficiaries.

Physicians Practice Cost and Income Survey (PPCIS): A survey of a national sample of physicians regarding practice characteristics, cost, and reimbursement, conducted by NORC in 1984 with a follow-up in 1987. Sponsored by HCFA and ASPE.

Physician-Supervised Diagnostic Services: Tests to diagnose specific medical problems that involve a large technical component and relatively little physician involvement.

Practice Guidelines: Clinical recommendations for patient care.

Practitioner: One who practices medicine; under Medicare, practitioners may include physicians, chiropractors, dentists, podiatrists, and physician's assistants.

Premium: An amount paid periodically to purchase medical insurance benefits; for Medicare Part B services in 1988, beneficiaries must pay a premium of $24.80 per month.

Prepayment Screen: A computerized edit of claims information intended to identify a potential utilization problem, such as excessive hospitals visits. Claims that fail these screens or edits are usually reviewed manually by contractor staff to determine whether questioned services were justified.

Prevailing Charge: One of the factors determining a physician's payment for a service under Medicare. Currently set at the 75th percentile of customary charges of all physicians in the community. Since 1976, its growth has been limited to the increase in the Medicare Economic Index (MEI). See Customary Charge; Customary, Prevailing, and Reasonable; Medicare Economic Index.

Procedure Coding: See Coding.

Reasonable Charge: See Approved Charge.

Reduction: See Charge Reduction.

Relative Value Scale (RVS): Index that assigns weights to each medical service; the weights represent the relative amount to be paid for each service.

Specialty Differential: The difference in the relative value or amount paid for the same service when performed by different specialists.

Staff Model HMO: An HMO in which physicians are generally salaried employees of the HMO. See Health Maintenance Organization.

Supplementary Medical Insurance Program (SMI): See Part B (Medicare).

Supplier: Providers, other than practitioners, of health care services. Suppliers under Medicare include independent labs, durable medical equipment providers, ambulance services, orthotists, prosthetists, and portable X-Ray providers.

Unbundle: To bill, code, or pay separately for services that could be included in a single package.

Upcode: To bill for a service more intense, extensive, or costly than that which was provided.

Usual, Customary, and Reasonable (UCR): A method of establishing payment used by private insurers that is comparable to Medicaids Customary, Prevailing, and Reasonable.

Utilization Review (UR): The scrutinizing of services delivered by a health care practitioner or provider to determine whether those services were medically necessary and appropriate.

Visit: The cognitive, non-technical, physician services involved in the diagnosis and care of a patient.

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